“a commitment to quality”

HYDRAULIC/PNEUMATIC TUBING SPIDERS

Model “B”, “C”, & “HD”

OPERATION AND SERVICE MANUAL

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TECHNICAL DATA
FOR MODEL "B" TUBING SPIDER
LOAD RATING 110,000 LBS.

Material: Alloy Steel, Heat Treated

Weight (less slip): 200 lbs. (90.7 Kg)

Height (to top of guard): 14" (355 mm)

Base Dimensions: 12" x 16" 305 - 406

Bolt Centers: 11-1/2" to 16-3/4" (292 - 425mm)

Gate Opening: 4-1/4" (107mm)

Bowl Opening: 4-3/4" (120mm)

Hydraulic Operating Pressure: 300-500 PSI (20.0 – 34.5 Bar)

Hydraulic Fluid Consumption (per stroke): 4.3 cu. in. (70.5 cm^3)

Pneumatic Operating Pressure: 90-120 PSI (6.2 – 8.3 Bar)

Pipe Range: 1.05" - 3-1/2" (26.7 - 88.9 mm)

TECHNICAL DATA
FOR MODEL "C" TUBING SPIDER
LOAD RATING 165,000 LBS.

Material: Alloy Steel, Heat Treated

Weight (less slip): 398 lbs. (181 Kg)

Height (to top of guard): 16-1/2" (419 mm)

Base Dimensions: 16-1/2" X 18-1/2" (419 - 470 mm)

Bolt Centers: 12-3/4" to 16-1/4" (324 - 413 mm)

Gate Opening: 6" (152 mm)

Bowl Opening: 6-1/2" (165 mm)

Hydraulic Operating Pressure: 300-500 PSI (20.0-34.5 Bar)

Hydraulic Fluid Consumption (per stroke): 4.3 cu. in. (70.5 cm^3)

Pneumatic Operating Pressure: 90-120 PSI (6.2 – 8.3 Bar)

Pipe Range: 1.05" - 5-1/2" (26.7 - 139.7 mm)

TECHNICAL DATA
FOR MODEL "HD" TUBING SPIDER
LOAD RATING 250,000 LBS.

Material: Alloy Steel, Heat Treated

Weight (less slip): 445 lbs. (202 Kg)

Height (to top of guard): 17" (419 mm)

Base Dimensions: 16-1/2" X 18-1/2" (419 - 470 mm)

Bolt Centers: 12-3/4" to 16-1/4" (324 - 413 mm)

Gate Opening: 6" (152 mm)

Bowl Opening: 6-1/2" (165 mm)

Hydraulic Operating Pressure: 300-500 PSI (20.0 – 34.5 Bar)

Hydraulic Fluid Consumption (per stroke): 4.3 cu. in. (70.5 cm^3)

Pneumatic Operating Pressure: 90-120 PSI (6.2-8.3 Bar)

Pipe Range: 1.05" - 5-1/2" (2.67 -139.7 mm)

TUBING SPIDER OPERATION

1. The purpose of the tubing spider assembly is to support the tubing string, when it is lowered into or raised from the well bore of an oil or gas well. The bore of the tubing spider assembly is located and held in position over the well head and blowout preventer system.

2. The tubing spider assembly operates from pneumatic pressure (90-120 psi) or hydraulic pressure 300-500 PSI that forces a cylinder to move a piston. The piston is connected to the slip assembly via lift arms, crank shafts and link. When the piston moves in one direction, the slip assembly moves “up”, which prevents the teeth on the slip inserts from engaging or supporting the tubing string. If the piston moves in the other direction, the slip assembly moves “down”, which causes the teeth of the slip inserts to contact, engage and support the tubing string, if the tubing string is lowered slightly. The location of the pneumatic/hydraulic valve for controlling the pressure to the cylinder is easily accessible by the rig crew operator. If the tubing spider needs to support tubing string for an extended period of time, the accidental operation of the pneumatic/hydraulic valve might cause the tubing spider to release the tubing string. The valve needs protection from such a potential accident. Also engage the safety latch to prevent the link from moving to release the holding slip assembly.

3. The slip insert size needs to match the size of the tubing string, or the tubing spider will not support the tubing string.

4. When the rig crew operates the tubing spider assembly, they need to watch for operational and functional problems. This monitoring might reveal necessary maintenance or repair requirements.

5. Keep the slip insert teeth and slip assembly clean and free from hardened mud, grease, sand, etc. which might effect the operation of the slip support mechanism.

6. Lubricate the grease fittings to the four crank shaft bushings and to the two link bushings with Shell B & B code 70919 daily to allow free and easy movement of the slip assembly into and out of the tapered seat in the bowl.

7. Keep fingers, hands, feet, etc. away from the moving lift arm and slip assembly and from the moving link and crank shafts to prevent possible bodily injury to the rig crew. Also carefully route the pressure hoses to the tubing spider, control valve and pressure sources in order to prevent a “trip hazard” or to interfere with personnel movement on the rig floor.

8. If a tubing packer or other downhole apparatus is larger than the through bore of the tubing spider, this requires removal of the tubing spider to permit passage into the well bore. After the oversize apparatus is in the well bore, open the gate and slide the tubing spider around the tubing string. Then attach the tubing spider to the wellhead and blowout preventer system with the gate closed. Operate the tubing spider to attach and lower the tubing string into the well.

TUBING SPIDER SERVICE AND MAINTENANCE
(REFER TO ILLUSTRATIONS ON PAGES 15, 18)

DAILY

1. Whenever doing any work on the tubing spider assembly, release the chain and/or hold down system, which positions the spider over the wellhead and blowout prevent system. Move the spider assembly to a convenient place to work, so that parts and/or tools cannot fall into the well.

2. Are slip insert teeth clean and free of dried/hardened mud and/or grease, sand, etc.? Clean is required.

3. Are slip insert teeth worn, chipped, broken, etc.? If they are, replace with a new slip insert set per Slip Insert Replacement Instructions.

4. Are slip inserts loose in the slip bodies? With a vertical movement of over .100", replace the slip assembly per Slip Assembly Replacement Instructions.

5. Is the size of the slip inserts, the same as the tubing, which is run through the Tubing Spider? Install the proper size of slip insert set, if necessary. See Slip Insert Replacement Instructions.

6. With tubing extending through the tubing spider, do the lift arms contact the top of the body, when the slip assembly engages the tubing? This may indicate a worn bowl in the body or worn slip bodies. Testing will determine the cause of the problem. With tubing extending through the tubing spider, is the bottom of the landed slip assembly even with the bottom of the bowl or below? If it is above the body bottom, and the lift arms are not touching the top of the body, the slip assembly and bowl are okay. If it is below, replace the slip assembly with a new one per Slip Assembly Replacement Instructions. Then land the new slip assembly around the tubing string and check the location of the slip assembly bottom with respect to the body bottom. If the slip assembly is above bowl bottom, then it is okay. If slip assembly bottom is even or below the bowl bottom, replace the body. Send spider to an authorized OCM repair facility for repair or replacement.

7. Does the pneumatic/hydraulic system function and operate correctly? If the pneumatic/hydraulic system works well, the system is okay. If the system has a problem, it needs repair or replacement. It is possible to replace the seals in the cylinder or to replace the complete cylinder per Cylinder Seal Replacement Instructions.

NOTE: The hydraulic/pneumatic cylinder has normal hydraulic working pressure of 300-500 PSI. (20.0-34.5 bar) and normal compressed air working pressure of 90-120 PSI. (6.2-8.3 bar).

8. While lubricating the bushings of the crank shafts or link are the bushings worn or loose? If they are not worn or loose, this is okay. If they are worn or loose, replace the worn parts with the proper Bushings per Bushing Replacement Instructions.

NOTE: The crank shafts might also require replacement.

9. While checking the function and operation of the spider, check the looseness of the bolt between the yoke and link and the bolt between the end of the cylinder and mounting bracket on the body. If it is too loose or the bolt is worn, replace the bolt.

SEMI-ANNUAL

1. Includes all daily service and maintenance activities.

2. NDE testing of exposed critical areas of slip bodies, spider body, gate, and door pins.

3. Replace crank bushings (4) in the body and link bushings (2) in the link per Bushing Replacement Instructions.

4. Replace seals in the pneumatic/hydraulic cylinder per Cylinder Seal Replacement Instructions.

5. A copy of this service and maintenance report should be filed in the Equipment Record File.

ANNUAL

1. Includes all daily service and maintenance activities.

2. Disassemble the tubing spider by removing slip assembly, slip inserts, lift arms, cranks, link, cylinder, gate, and door pins in order to NDE all components.

NOTE: Cranks and cylinder are to be replaced. See the various Replacement Instructions for the Disassembly Procedures.

3. Check fit of door pins, gate, and body. If too loose door pins should be replaced.

4. Replace crank bushings (4) in the body and link bushings (2) in the link, per Bushing Replacement Instructions.

5. Reassemble the tubing spider with a new cylinder and cranks along with the other parts which are good. Replace any worn or damaged parts with new or reconditioned parts.

6. Check the function and operation of tubing spider to verify that it is working properly.

7. A copy of this service and maintenance report should be filed in the Equipment Record File.

COMPONENT REPLACEMENT SCHEDULE

COMPONENT	REPLACEMENT TIMING	REPLACEMENT INSTRUCTIONS
Slip Inserts	*	Slip Insert Replacement Instructions
Slip Assembly	*	Slip Assembly Replacement Instructions
Bushings in Body and/or Link	6 months	Bushing Replacement Instructions
Cylinder	1 year	Cylinder Seal Replacement Instructions
Seals in Cylinder	6 months	Cylinder Seal Replacement Instructions
Crank Shafts	1 year	Bushing Replacement Instructions

* As needed, depending on usage

NOTE: The Oil Country, Model "B", "C", & "HD" Spiders, are load supporting devices. Critical components are engineered and manufactured from a variety of heat treated alloy steels. Therefore, absolutely no weld repair on any of the component parts will be allowed without written authorization from Oil Country Manufacturing, Inc. Unauthorized weld repair on this equipment will void all Oil Country warranties and liability.

SLIP INSERT REPLACEMENT INSTRUCTIONS

1. With the spider assembly away from the well, use the pneumatic/hydraulic system to lift and hold the slip bodies in the raised position, which provides access to the slip inserts. The slip bodies, inserts and components illustration on page 31 will help in understanding the described procedure.

2. Remove the four cotter pins (ref. 602).

3. Remove the four retainer pins (ref. 601). A drift pin (3/16" - 7/32" O.D.) might be required to drive the retainer pin (ref. 601) from the hole formed between the slip body (ref. 620) and slip insert (ref. 650).

4. Remove the four slip inserts (ref. 650) (part number depends on size of insert) by sliding them out of the "dove tail" groves in the slip bodies (ref. 620).

5. Clean dirt & hardened grease from the slip body (ref. 620). Then re-grease the slip body with grease.

6. Install new slip inserts (ref. 650) into the slip bodies (ref. 620). Align the vertical groove on the insert back with the main groove in the inner bore of the slip body (ref. 620).

   NOTE: Only replace slip inserts with a new set of four inserts.

7. Insert the retainer pin (ref. 601) into the hole formed between the slip insert (ref. 650 and slip body (ref. 620).

8. Insert the cotter pin (ref. 602) into the hole in the slip body (ref. 620). Spread the cotter pin legs, so it will not come out. The spider is ready to use.

SLIP ASSEMBLY REPLACEMENT INSTRUCTIONS

1. With the spider assembly away from the well, use the hydraulic/pneumatic system to lift and hold the slip body assembly halves in the raised position, which provides access to the slip assembly. The slip bodies, inserts and component illustrations on pages 15, 20, & 31 will help in understanding the described procedure.

2. Remove the nuts (ref. 117) from arm bolts (ref. 116). This will release the two slip assembly halves from the lifting arms (ref. 106).

3. Install the new arm bolt (ref. 116) and nut (ref. 117) into the top of each new slip assembly half. Always keep the slip assembly halves paired together, as they are maintained sets. Tighten the nut, so the end of the bolt is flush with the outside edge of the nut.

NOTE: The plastic insert, locking means on the nut, prevents the nut from unscrewing.

4. Install new slip inserts (ref. 650) into the slip assembly halves per Slip Insert Replacement Instructions on page 8.

5. Take one slip assembly half (ref. 620) and position/align the lower hole in the slip assembly half with the hole at the end of the lifting arm (ref. 106). Install the arm bolt (ref. 116) into the aligned holes and attach the mating nut (ref. 117). Tighten the nut, so the end of the bolt is flush with the outside edge of the nut. Repeat this procedure for the other slip assembly half.

NOTE: The slip assembly half needs to have movement with respect to the lifting arm, so that the slip assembly is free to float in the spider bowl, as the slips are set to support the tubing string. Operate the hydraulic/pneumatic system to check the function of the slip assembly in the bowl of the spider assembly.

6. The spider is ready to use.

BUSHING REPLACEMENT INSTRUCTIONS

1. With the spider assembly away from the well, use the hydraulic/pneumatic system to lift and hold the slip bodies in the raised position, which will provide access to the slip body assembly. Refer to illustrations on pages 15, 20, & 31 for removal and replacement of the slip body assembly.

2. Remove slip assembly halves per the “Slip Assembly Replacement Instructions” described on page 9.

3. Bleed-off pressure to hydraulic/pneumatic cylinder. Remove nut (ref. 112) and yoke bolt (ref.111) from the yoke (ref. 107). Move the yoke away from the link. Refer to the spider assembly illustrations on pages 15 & 20.

4. Remove two retainer rings (ref. 122), and remove link (ref. 103) from the left/right crankshafts (ref. 104 and 105).

5. Use a press or bushing puller to remove the two bushings (ref. 125) from the link (ref. 103).

6. Move lifting arm (ref. 106) into position to drive out the tapered pins (ref. 119) from both lifting arms (ref. 106).

7. Remove set crews (ref. 118) which secure the lifting arms (ref. 106) to the left/right crankshaft (ref. 104 and 105).

8. Lightly tap on the ends of the left/right crankshafts to remove them from the spider body (ref. 101).

9. Use a press or bushing puller to remove the four bushings (ref. 124) from the spider body (ref.101).

10. Install four new bushings (ref. 124) into the spider body (ref. 101).

11. Install two new bushings (ref. 125) into the link (ref. 103).

12. Install left crankshaft (ref. 104) into the spider body (ref. 101) with spacer (ref. 126) and lifting arm (ref. 106) in proper position. Install right crankshaft (ref. 105) into spider body (ref. 101) with spacer (ref. 126) and lifting arm (ref. 106) in proper position.

13. Install link (ref. 103) onto the ends of the left/right crankshafts (ref. 104 and 105). Install the retainer rings (ref. 122) on crankshafts to retain the link.

BUSHING REPLACEMENT INSTRUCTIONS (CONT'D)

14. When looking at the link (ref. 103) move the link to the far left position. Shift and position the lifting arm (ref. 106) on the left crank shaft (ref. 104) and install the two tapered pins (ref. 119) into the mating holes in the lifting arm (ref. 106) and left crankshaft (ref. 104). Install the setscrew (ref. 118) located on lifting arm to secure the lifting arm to the shaft. Repeat this process for the right crankshaft and its lifting arm.

NOTE: When a new lifting arm and/or crank shaft is used, the lifting arm needs to be "timed" with respect to the crank shaft to raise and lower the slip assembly halves together. The "timing" is not a simple procedure and the services of an authorized OCM repair facility could be used. The "timing" can be set using Crank Shaft Replacement Instructions on page 12.

15. Use bolt (ref. 111) and nut (ref. 112) to attach yoke (ref. 107) to the link (ref. 103).

16. Attach the slip assembly halves to the lifting arms (ref. 106) per the "Slip Assembly Replacement Instructions" described on page 9. The spider is ready for use.

CRANK SHAFT REPLACEMENT INSTRUCTIONS

1. Follow steps “1” through “13” of “Bushings Replacement Instructions” on page 10, to replace the original crankshafts (ref. 104 and 105) and lift arms (ref. 106) with new parts.

2. Shift the lifting arms back and forth on the shafts so they are centered to the bore of the spider body. Rotate the lift arms (ref. 106) so they are resting on top of bowl base of spider body (ref. 101) (illustration “A”) page 13. Move link arm (ref. 103) until large part of casting is .12” or 3.1 mm from safety latch bolt (ref. 136) (illustration “B”). Tighten setscrews (ref. 118) which lock the lifting arms to the left and right crankshafts. Tie down arms with a tie down bar on a drill table. Use a center punch to locate two holes and drill the two holes through the center of each lifting arm and respective crankshaft. These holes should be placed in the same plane, approximately 1” away from the setscrew hole, to reduce the possibility of a stress riser on the lifting arm. The drill size is 11/32” and ream the holes with a #7 tapered reamer. Install #7 tapered pins (ref. 119) into the reamed holes.

NOTE: This is a difficult operation to do. It is wise to send the tubing spider to an authorized OCM repair facility to have this done properly.

3. Use bolt (ref. 111) and nut (ref. 112) to attach yoke (ref. 107) to the link (ref. 103). This is illustrated on pages 15 & 21.

4. Install the slip assembly halves to the lifting arms per the “Slip Assembly Replacement” procedure on page 9.

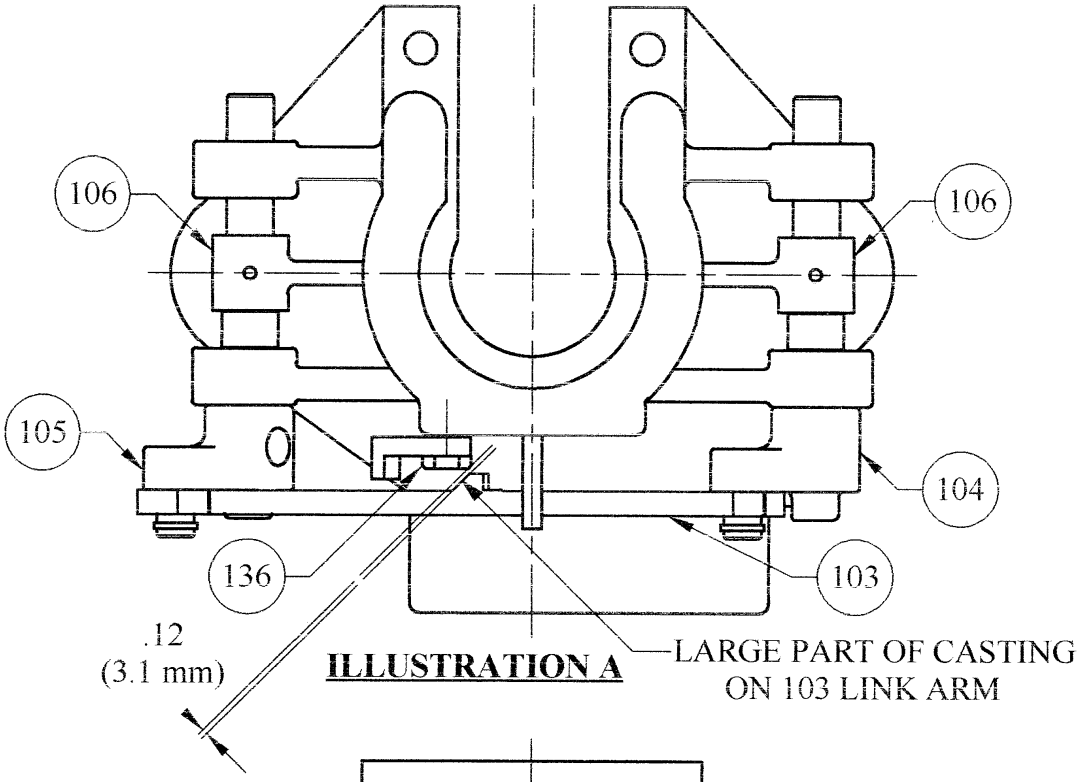


ILLUSTRATION A

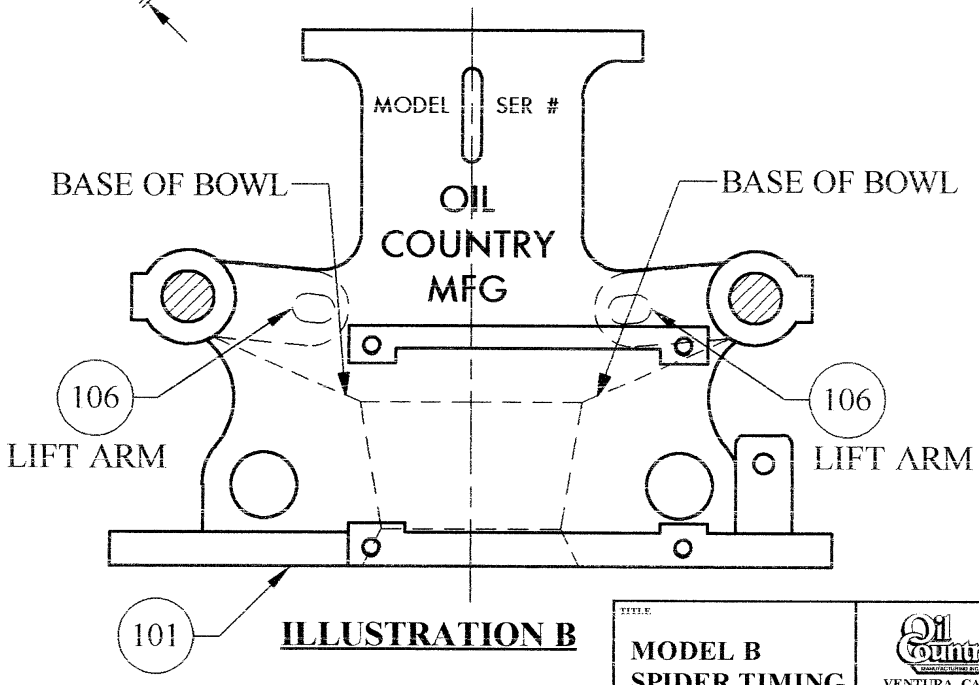


ILLUSTRATION B

TITLE: **MODEL B SPIDER TIMING PROCEDURE**	Oil Country MANUFACTURING INC. VENTURA, CA USA
	SIZE A | SHEET 1 OF 1 | REV
	DRAWING NO. **ILL-357**

HYDRAULIC/PNEUMATIC SEAL REPLACEMENT INSTRUCTIONS

1. With the spider assembly away from the well, disconnect the hydraulic /pneumatic lines which operate the hydraulic/pneumatic cylinder. Refer to the spider assembly illustrations on pages 15, 18, 37, & 39.

2. Remove bolts (ref. 110 and 111) and nuts (ref. 112), which hold the hydraulic/ pneumatic cylinder to the spider. Remove the cylinder assembly (ref. 140) from the spider.

3. Remove the retainer ring (ref. 147) from the cylinder assembly. Pull on yoke (ref. 107) to extract the piston rod (ref. 142) with piston and cylinder head (ref. 143). Refer to the cylinder assembly illustration on page 37.

4. Remove yoke (ref. 107) and jam nut (ref. 148) from the piston rod (ref. 142).

5. Remove the cylinder head (ref. 143) from the piston rod (ref. 142). Also remove piston lock nut (ref. 152) and piston head (ref. 151) from piston rod (ref. 142).

6. Check cylinder bore and piston/rod surfaces for any damage or scratches. If damage is present, replace those parts.

7. Inspect o-ring grooves for damage. Remove and replace all o-rings. Replace all damaged parts.

8. Insert piston rod (ref. 142) through cylinder head (ref. 143) and through piston head (ref. 151). Install piston lock nut (ref. 152) onto piston rod (ref. 142).

9. Install jam nut (ref. 148) and yoke (ref. 107) onto the piston rod (ref. 142).

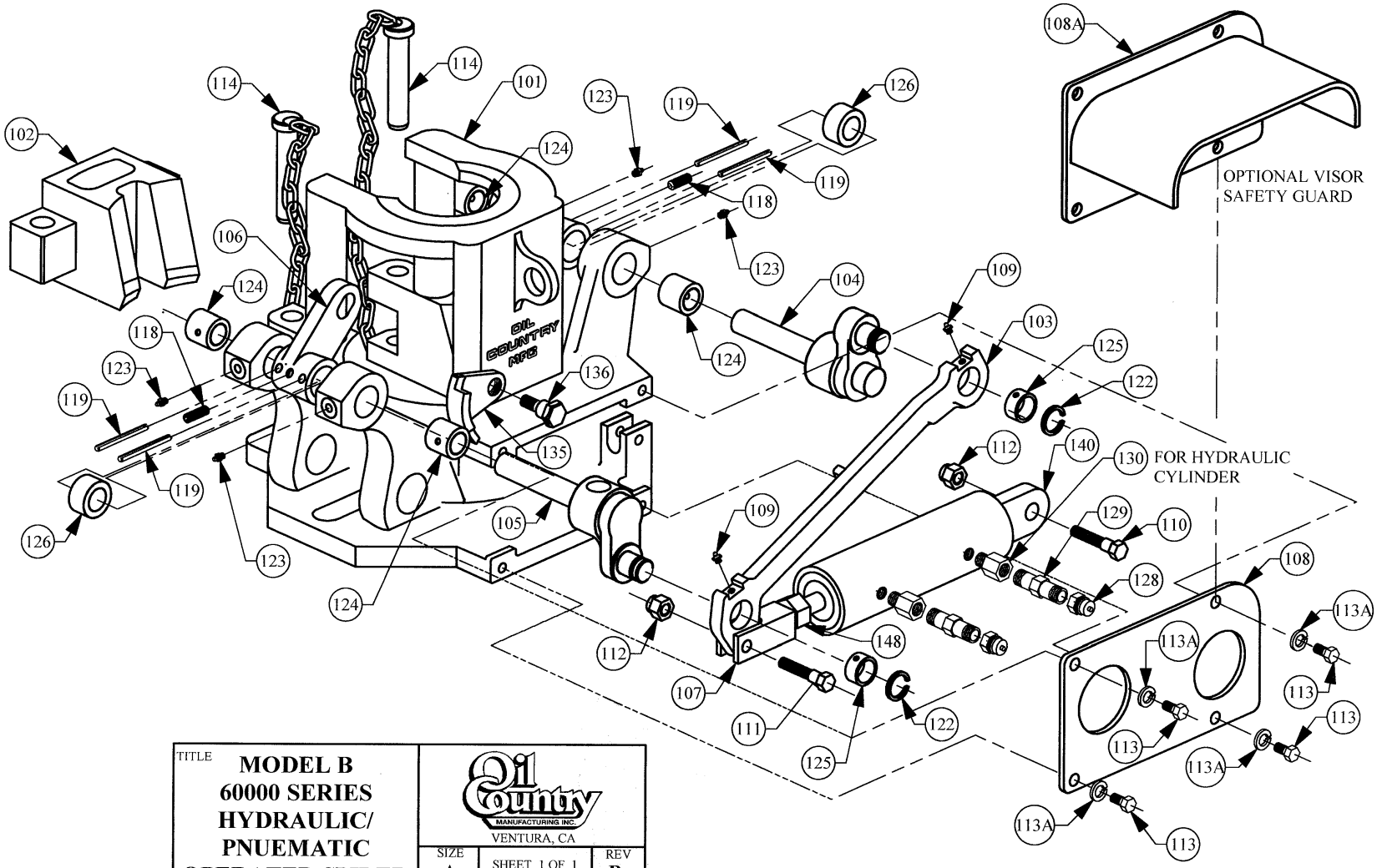
10. Install piston head (ref. 151) and cylinder head (ref. 143) into cylinder (ref. 141).

11. Install retainer ring (ref. 147) to secure cylinder head (ref. 143) to the cylinder (ref. 141). Pressure test the hydraulic/pneumatic cylinder.

12. Install cylinder assembly into the spider using the bolts (ref. 110 and 111) and nuts (ref. 112). When running a tubing string through the spider assembly, adjust yoke (ref. 107) so the lifting arms pass the vertical position and the slip assembly is retracted sufficiently to prevent the tubing couplings from contacting the slip inserts. Tighten jam nut (ref. 148) to lock the yoke's position on the piston rod (ref. 142).

13. Reattach the hydraulic/pneumatic lines to the cylinder. Pressure test cylinder in both directions to check function and operation on the tubing spider.

14. The spider assembly is ready to use.



TITLE		
MODEL B 60000 SERIES HYDRAULIC/ PNUEMATIC OPERATED SPIDER ASSEMBLY	Oil Country MANUFACTURING INC. VENTURA, CA	
	SIZE **A**	SHEET 1 OF 1 / REV **B**
	DRAWING NO. **ILL-314**	

MODEL B (PNEUMATIC)

TUBING SPIDER ASSEMBLY (110,000 LB. RATING)
PNEUMATIC OPERATION

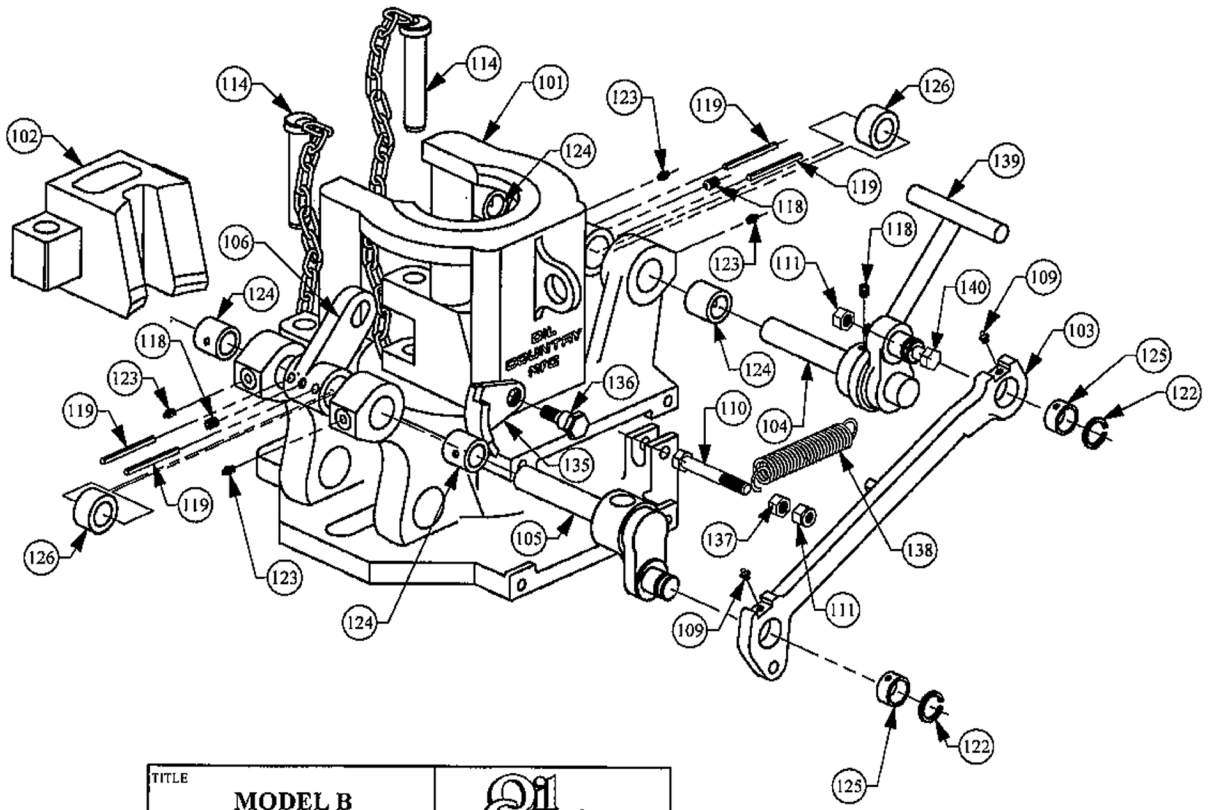
ASSEMBLY PART NUMBER OPTIONS (PNEUMATIC)	
ASSY P/N	**DESCRIPTION**
60000-100	Spider Assembly With Standard Safety Guard (ref 108)
60000	Spider Assembly With (Safety Guard/Visor ref 108A); (Pipe Nipples And Male Quick Disconnection's (Refs 128 And 129) For Oil Country Hoses

REF. NO.	PART NO.	QTY.	PART DESCRIPTION
101	60101	1	Body, Type "B" Spider (Includes one 60102 Spider Gate and two 60114 door pins with chains)
102	60102	1	Spider Gate
103	60103	1	Link (Includes two 60125 link bushings and two 992073-4 grease fittings)
104	60104	1	Left hand crank shaft
105	60105	1	Right hand crank shaft
106	60106	2	Lift arm
107	65107	1	Yoke
108	60108	1	Safety Guard
108A	60108-100	1	Safety Guard With Visor
109	992073-04	2	Grease Fitting
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
113	992005-01	4	Hex Head Cap Screw
113A	992051-10	4	Lock Washer
114	60114	2	Door Pin with Chain
118	992075-144	2	Set Screw (For lift arm)
119	992161-06	4	Taper Pin (For lift arm)
122	65122	2	Retaining Clip (For shaft)
123	992073-01	4	Grease Fitting
124	60124	4	Crank Bushing
125	60125	2	Link Bushing
126	60126	2	Spacer
128	992285-MH-6-6	2	Male Disconnect
129	46053	2	Pipe Nipple
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
140	65140	1	Pneumatic Cylinder
148	992107-15	1	Jam Nut

MODEL B (HYDRAULIC)
TUBING SPIDER ASSEMBLY (110,000 LB. RATING)
HYDRAULIC OPERATION

ASSEMBLY PART NUMBER OPTIONS (PNEUMATIC)	
ASSY P/N	**DESCRIPTION**
60000H-100	Spider Assembly With Standard Safety Guard (ref 108)
60000H	Spider Assembly With (Safety Guard/Visor ref 108A); (Male Quick Disconnection's (Refs 128 And 129) For Oil Country Hoses

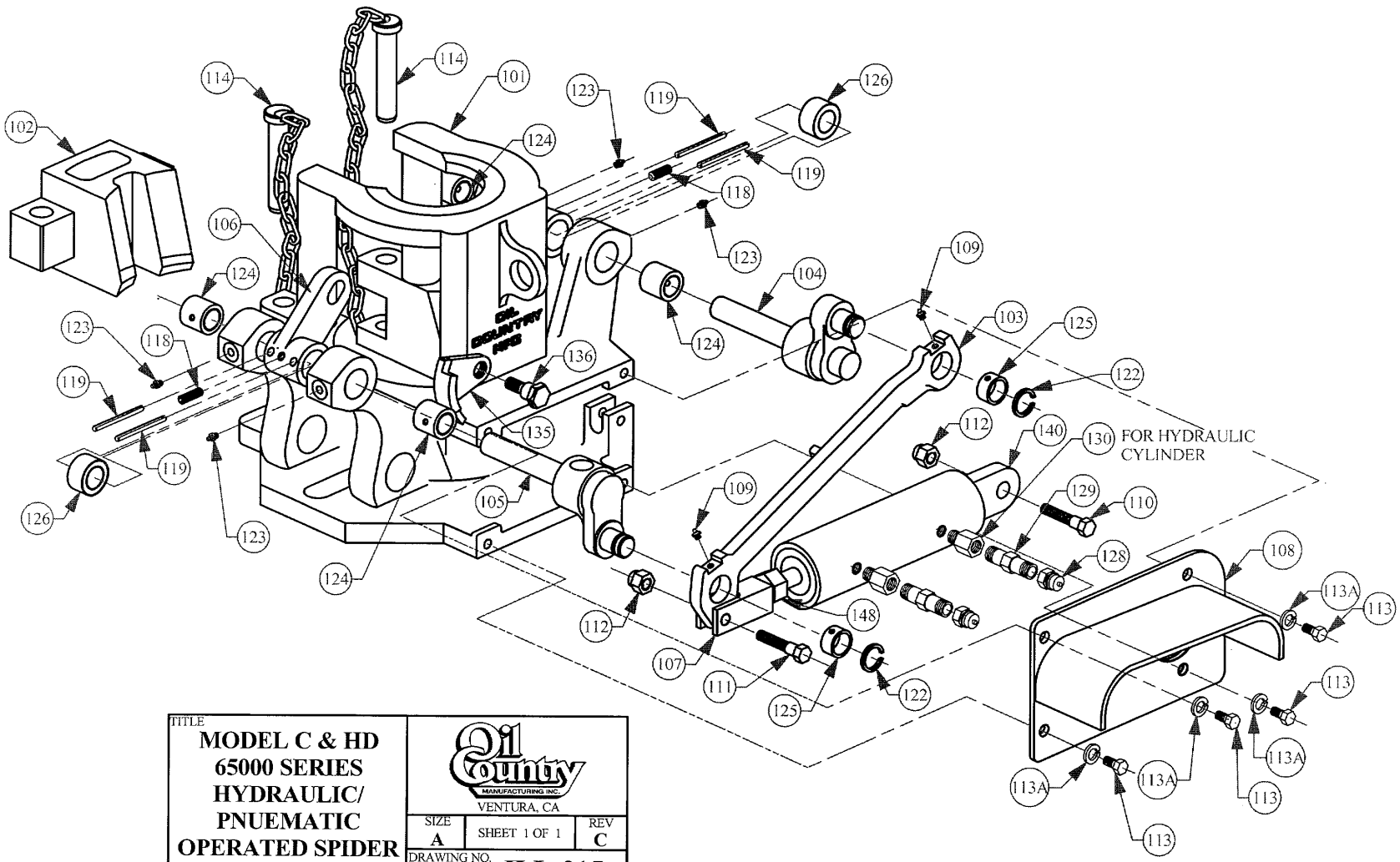
REF. NO.	PART NO.	QTY.	PART DESCRIPTION
101	60101	1	Body, Type "B" Spider (Includes one 60102 Spider Gate, and two 60114 Door Pins with Chains)
102	60102	1	Spider Gate
103	60103	1	Link (Includes two 60125 Link Bushings and two 992073-4 Grease Fittings)
104	60104	1	Left Hand Crank Shaft
105	60105	1	Right Hand Crank Shaft
106	60106	2	Lift Arm
107	65107	1	Yoke
108	60108	1	Safety Guard
108A	60108-100	1	Safety Guard With Visor
109	992073-4	2	Grease Fitting
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
113	992005-01	4	Hex Head Cap Screw
113A	992051-10	4	Lock Washer
114	60114	2	Door Pin with Chain
118	992075-144	2	Set Screw (For Lift Arm)
119	992161-06	4	Taper Pin (For Lift Arm)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	60124	4	Crank Bushing
125	60125	2	Link Bushing
126	60126	2	Spacer
128	992285-MH-6-6	2	Male Disconnect
129	46053	2	Pipe Nipple
130	992308-4-6	2	1/4" Male X 3/8" Female NPT Adapter
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
140	65140H	1	Hydraulic Cylinder
148	992107-15	1	Jam Nut



TITLE			
MODEL B 60000 SERIES MANUAL OPERATED SPIDER ASSEMBLY	Oil Country MANUFACTURING INC. VENTURA, CA		
	SIZE A	SHEET 1 OF 1	REV A
PART NO. 60000-101	DRAWING NO. ILL-314-1		

MODEL B (MANUAL)
TUBING SPIDER ASSEMBLY (110,000 LB. RATING)
MANUAL OPERATION
P/N 60000-101
SEE ILLUSTRATION ILL-314-1

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
101	60000-101	1	Body, Type "B" Spider (Includes one 60102 Spider Gate, and two 60114 Door Pins with Chains)
102	60102	1	Spider Gate
103	60103	1	Link (Includes two 60125 Link Bushings and two 992073-4 Grease Fittings)
104	60161	1	Left Hand Crank Shaft
105	60105	1	Right Hand Crank Shaft
106	60106	2	Lift Arm
109	992073-4	2	Grease Fitting
110	992005-13	1	Hex Head Cap Screw
111	992089-09	2	Hex Nut
114	60114	2	Door Pin with Chain
118	992075-139	3	Set Screw (For Lift Arm & Tee Handle Assy)
119	992161-06	5	Taper Pin (For Lift Arm & Tee Handle Assy)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	60124	4	Crank Bushing
125	60125	2	Link Bushing
126	60126	2	Spacer
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
137	992107-09	1	Jam Nut
138	992546	1	Extension Spring
139	60160-200	1	Tee Handle, Sub-Assembly (Includes Ref 118)
140	60162	1	Screw, Spring Retainer



TITLE		
MODEL C & HD 65000 SERIES HYDRAULIC/ PNUEMATIC OPERATED SPIDER ASSEMBLY	Oil Country MANUFACTURING INC. VENTURA, CA	
	SIZE **A**	SHEET 1 OF 1 / REV **C**
	DRAWING NO. **ILL-315**	

MODEL C (PNEUMATIC)
TUBING SPIDER ASSEMBLY (165,000 LB. RATING)
PNEUMATIC OPERATION
65501-100*

ASSEMBLY P/N OPTIONS (PNEUMATIC)			
REF. NO.	**PART NUMBER**	**QTY.**	**PART DESCRIPTION**
	65000-100 65501-100*		Spider Assembly With Standard Safety Guard and Pneumatic Cylinder Assy

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
101	65101 65511*	1 1	Body, Type "C" Spider (Includes one Spider Gate, and two Door Pins with Chains)
102	65102 65512*	1 1	Spider Gate
103	65103	1	Link (Includes two 65125 Link Bushings and two 992073-4 Grease Fittings)
104	65104	1	Left Hand Crank Shaft
105	65105	1	Right Hand Crank Shaft
106	65106	2	Lift Arm
107	65107	1	Yoke
108	65108	1	Safety Guard
108A	65108-100	1	Safety Guard With Visor
109	992073-4	2	Grease Fitting
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
113	992005-01	4	Hex Head Cap Screw
113A	992051-10	4	Lock Washer
114	65114	2	Door in with Chain
118	992075-144	2	Set Screw (For Lift Arm)
119	992161-06	4	Taper Pin (For Lift Arm)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	65124	4	Crank Bushing
125	65125	2	Link Bushing
126	65126	2	Spacer
128	992285-MH-6-6	2	Male Disconnect
129	46053	2	Pipe Nipple
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
140	65140	1	Pneumatic Cylinder
148	992107-15	1	Jam Nut

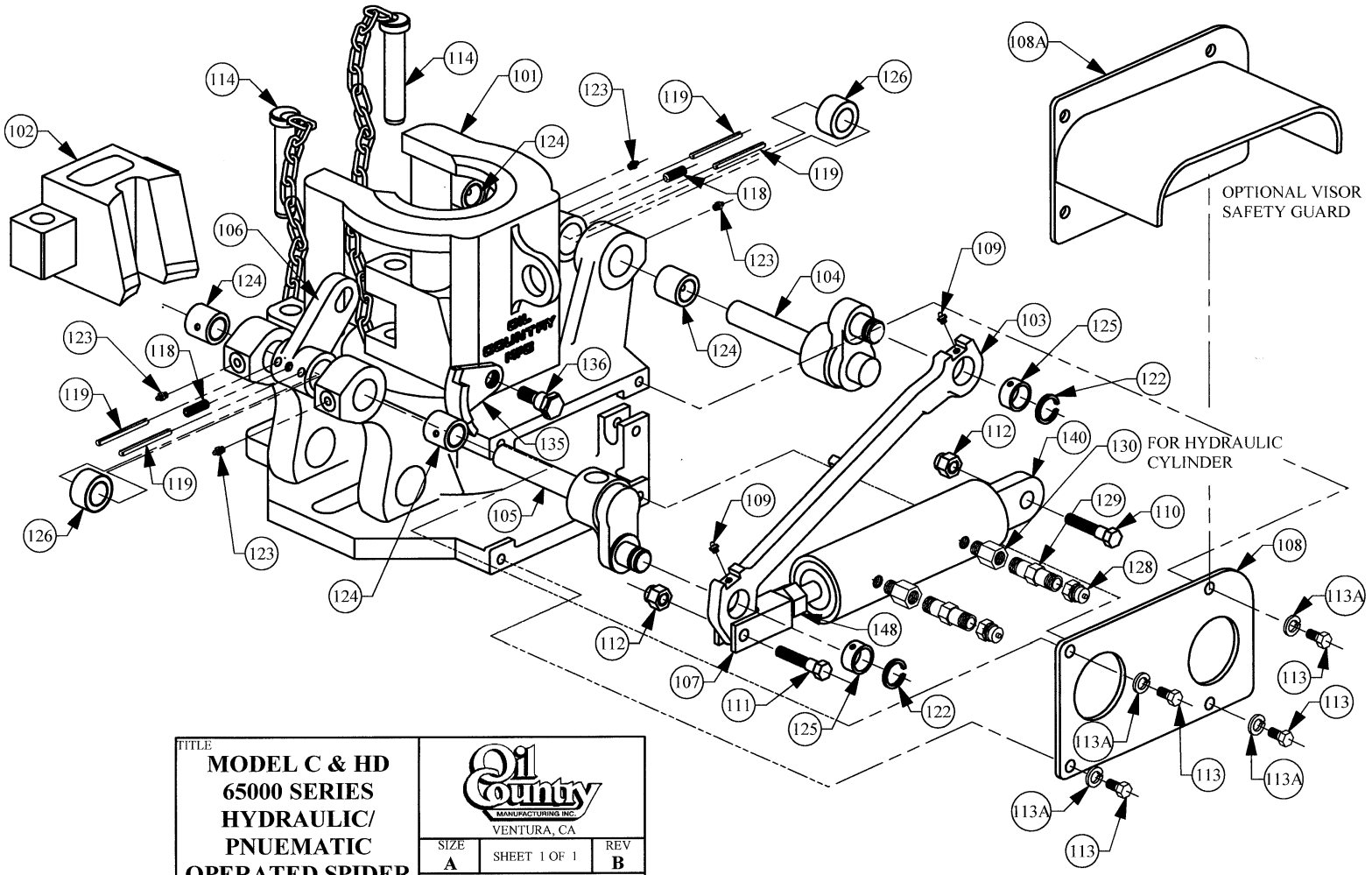
* New Part Numbers, Effective 10-01-04
(Not Interchangeable With Old Part Numbers)

MODEL C (HYDRAULIC)
TUBING SPIDER ASSEMBLY (165,000 LB. RATING)
HYDRAULIC OPERATION
65501-200*

ASSEMBLY P/N OPTIONS (HYDRAULIC)			
REF. NO.	**PART NUMBER**	**QTY.**	**PART DESCRIPTION**
	65000H-100 65501-200*		Spider Assembly Complete With Safety Guard and Hydraulic Cylinder Assy

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
101	65101 65511*	1 1	Body, Type "C" Spider (Includes one Spider Gate, and two Door Pins with Chains)
102	65102 65512*	1 1	Spider Gate
103	65103	1	Link (Includes two 65125 Link Bushings and two 992073-4 Grease Fittings)
104	65104	1	Left Hand Crank Shaft
105	65105	1	Right Hand Crank Shaft
106	65106	2	Lift Arm
107	65107	1	Yoke
108	65108	1	Safety Guard
108A	65108-100	1	Safety Guard With Visor
109	992073-4	2	Grease Fitting
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
113	992005-01	4	Hex Head Cap Screw
113A	992051-10	4	Lock Washer
114	65114	2	Door in with Chain
118	992075-144	2	Set Screw (For Lift Arm)
119	992161-06	4	Taper Pin (For Lift Arm)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	65124	4	Crank Bushing
125	65125	2	Link Bushing
126	65126	2	Spacer
128	992285-MH-6-6	2	Male Disconnect
129	46053	2	Pipe Nipple
130	992308-4-6	2	1/4" Male x 3/8" Female NPT Adapter
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
140	65140H	1	Hydraulic Cylinder
148	992107-15	1	Jam Nut

* New Part Numbers, Effective 10-01-04
(Not Interchangeable With Old Part Numbers)



TITLE **MODEL C & HD 65000 SERIES HYDRAULIC/ PNUEMATIC OPERATED SPIDER ASSEMBLY**	Oil Country MANUFACTURING INC. VENTURA, CA	
	SIZE **A**	SHEET 1 OF 1 / REV **B**
	DRAWING NO. **ILL-315**	

MODEL HD (PNEUMATIC)
TUBING SPIDER ASSEMBLY (250,000 LB. RATING)
PNEUMATIC OPERATION
65701-100*

ASSEMBLY P/N OPTIONS (PNEUMATIC)			
REF. NO.	**PART NUMBER**	**QTY.**	**PART DESCRIPTION**
	65000HD-100 65701-100*		Spider Assembly Complete With Safety Guard and Pneumatic Cylinder Assy

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
101	65101HD 65711*	1 1	Body, Type “HD” Spider (Includes one Spider Gate, and two Door Pins with Chains)
102	65102HD 65712*	1 1	Spider Gate
103	65103	1	Link (Includes two 65125 Link Bushings and two 992073-4 Grease Fittings)
104	65104	1	Left Hand Crank Shaft
105	65105	1	Right Hand Crank Shaft
106	65106	2	Lift Arm
107	65107	1	Yoke
108	65108HD	1	Safety Guard
108A	65108HD-100	1	Safety Guard With Visor
109	992073-4	2	Grease Fitting
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
113	992005-01	4	Hex Head Cap Screw
113A	992051-10	4	Lock Washer
114	65114 65727*	2 2	Door in with Chain
118	992075-144	2	Set Screw (For Lift Arm)
119	992161-06	4	Taper Pin (For Lift Arm)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	65124	4	Crank Bushing
125	65125	2	Link Bushing
126	65126	2	Spacer
128	992285-MH-6-6	2	Male Disconnect
129	46053	2	Pipe Nipple
130	992308-4-6	2	1/4" Male x 3/8” Female NPT Adapter
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
140	65140	1	Pneumatic Cylinder
148	992107-15	1	Jam Nut

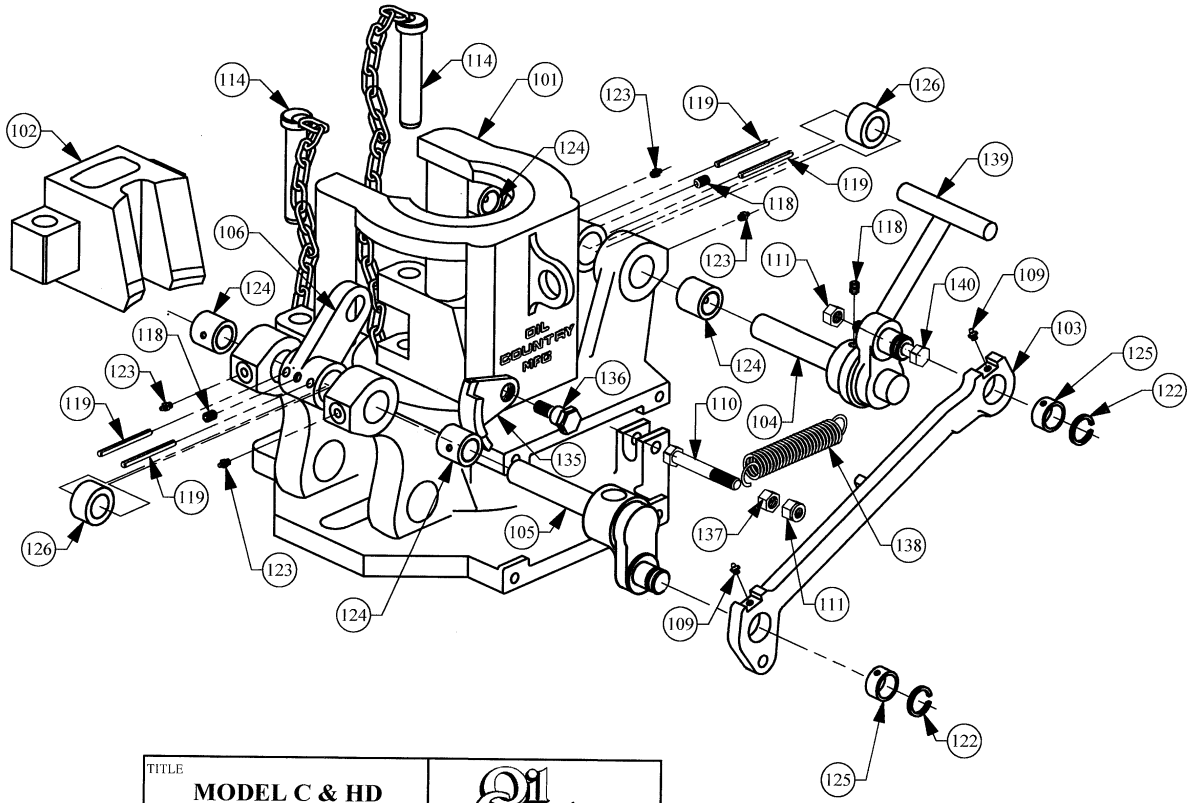
* New Part Numbers, Effective 10-01-04
(Not Interchangeable With Old Part Numbers)

MODEL HDH (HYDRAULIC)
TUBING SPIDER ASSEMBLY (250,000 LB. RATING)
HYDRAULIC OPERATION
65701-200*

ASSEMBLY P/N OPTIONS (HYDRAULIC)			
REF. NO.	**PART NUMBER**	**QTY.**	**PART DESCRIPTION**
	65000HDH-100 65701-200*		Spider Assembly Complete With Safety Guard and Hydraulic Cylinder Assy

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
101	65101HD 65711*	1 1	Body, Type “HD” Spider (Includes one Spider Gate, and two Door Pins with Chains)
102	65102HD 65712*	1 1	Spider Gate
103	65103	1	Link (Includes two 65125 Link Bushings and two 992073-4 Grease Fittings)
104	65104	1	Left Hand Crank Shaft
105	65105	1	Right Hand Crank Shaft
106	65106	2	Lift Arm
107	65107	1	Yoke
108	65108HD	1	Safety Guard
108A	65108HD-100	1	Safety Guard With Visor
109	992073-4	2	Grease Fitting
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
113	992005-01	4	Hex Head Cap Screw
113A	992051-10	4	Lock Washer
114	65114 65727	2 2	Door in with Chain
118	992075-144	2	Set Screw (For Lift Arm)
119	992161-06	4	Taper Pin (For Lift Arm)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	65124	4	Crank Bushing
125	65125	2	Link Bushing
126	65126	2	Spacer
128	992285-MH-6-6	2	Male Disconnect
129	46053	2	Pipe Nipple
130	992308-4-6	2	1/4" Male x 3/8” Female NPT Adapter
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
140	65140	1	Hydraulic Cylinder
148	992107-15	1	Jam Nut

* New Part Numbers, Effective 10-01-04
(Not Interchangeable With Old Part Numbers)

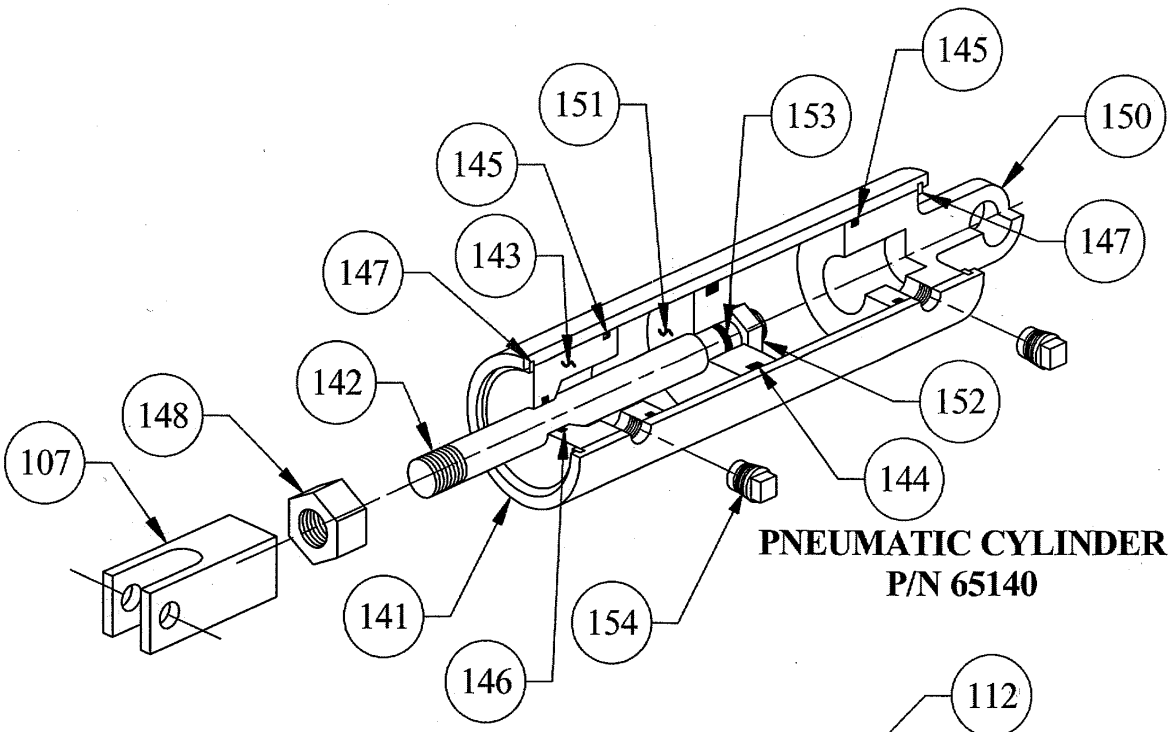


TITLE			
MODEL C & HD 65000 SERIES MANUAL OPERATED SPIDER ASSEMBLY	Oil Country MANUFACTURING INC. VENTURA, CA		
	SIZE **A**	SHEET 1 OF 1	REV **A**
PART NO. **65000-101**	DRAWING NO. **ILL-315-1**		

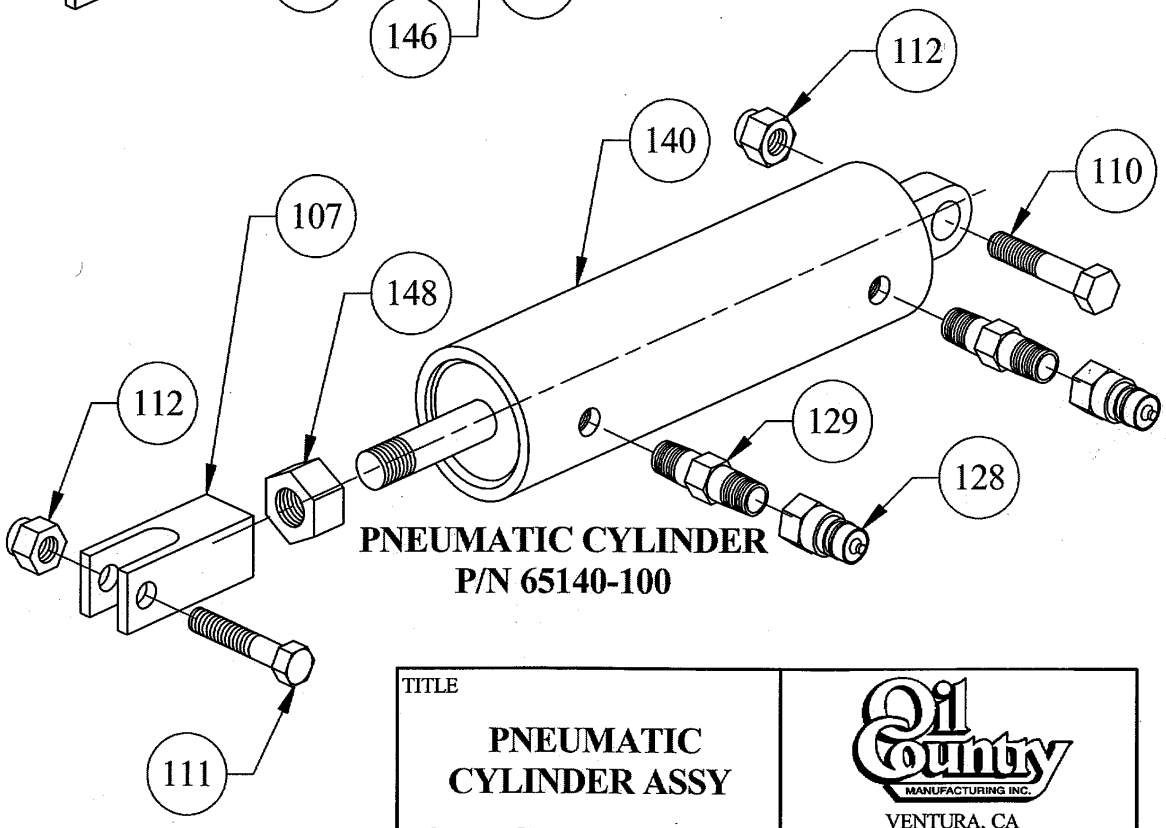
MODEL C (MANUAL)
TUBING SPIDER ASSEMBLY (165,000 LB. RATING)
MANUAL OPERATION
P/N 65000-101
65501-400*
(SEE ILLUSTRATION 315-1)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
101	65101 65511*	1 1	Body, Type "C" Spider (Includes one Spider Gate, and two Door Pins with Chains)
102	65102 65512*	1 1	Spider Gate
103	65103	1	Link (Includes two 65125 Link Bushings and two 992073-4 Grease Fittings)
104	65104-01	1	Left Hand Crank Shaft
105	65105	1	Right Hand Crank Shaft
106	65106	2	Lift Arm
109	992073-4	2	Grease Fitting
110	992005-13	1	Hex Head Cap Screw
111	992089-09	2	Hex Nut
114	65114	2	Door in with Chain
118	992075-139	3	Set Screw (For Lift Arm & Tee Handle Assy.)
119	992161-06	5	Taper Pin (For Lift Arm & Tee Handle Assy.)
122	65122	2	Retaining Clip (For Shaft)
123	992073-01	4	Grease Fitting
124	65124	4	Crank Bushing
125	65125	2	Link Bushing
126	65126	2	Spacer
135	65135	1	Safety Latch
136	65136	1	Safety Bolt
137	992107-09	1	Jam Nut
138	992546	1	Extension Spring
139	65160-200	1	Tee Handle, Sub-Assembly (Includes Ref 108)
140	95162	1	Screw, Spring Retainer

* New Part Numbers, Effective 10-01-04
(Not Interchangeable With Old Part Numbers)



PNEUMATIC CYLINDER
P/N 65140



PNEUMATIC CYLINDER
P/N 65140-100

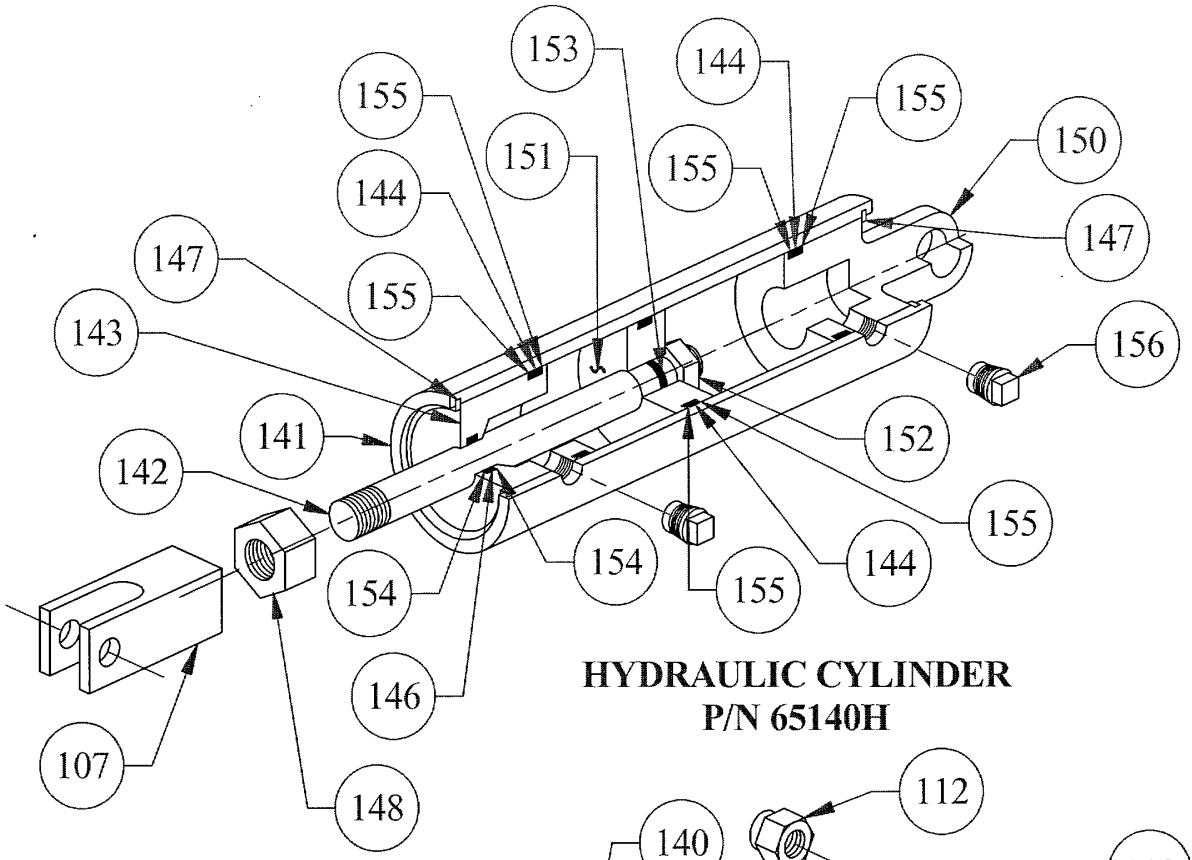
TITLE **PNEUMATIC CYLINDER ASSY** FOR MODEL B, C & HD TUBING SPIDERS	Oil County MANUFACTURING INC. VENTURA, CA	
	SIZE A	SHEET 1 OF 1
	REV A	
	DRAWING NO. **ILL-358**	

PNEUMATIC CYLINDER ASSEMBLY
FOR MODEL "B", "C", & "HD" TUBING SPIDERS
65140
PNEUMATIC CYLINDER
(LESS NIPPLES, MALE DISCONNECTS, YOKE, AND JAM NUT)
SEE ILLUSTRATION ILL-358

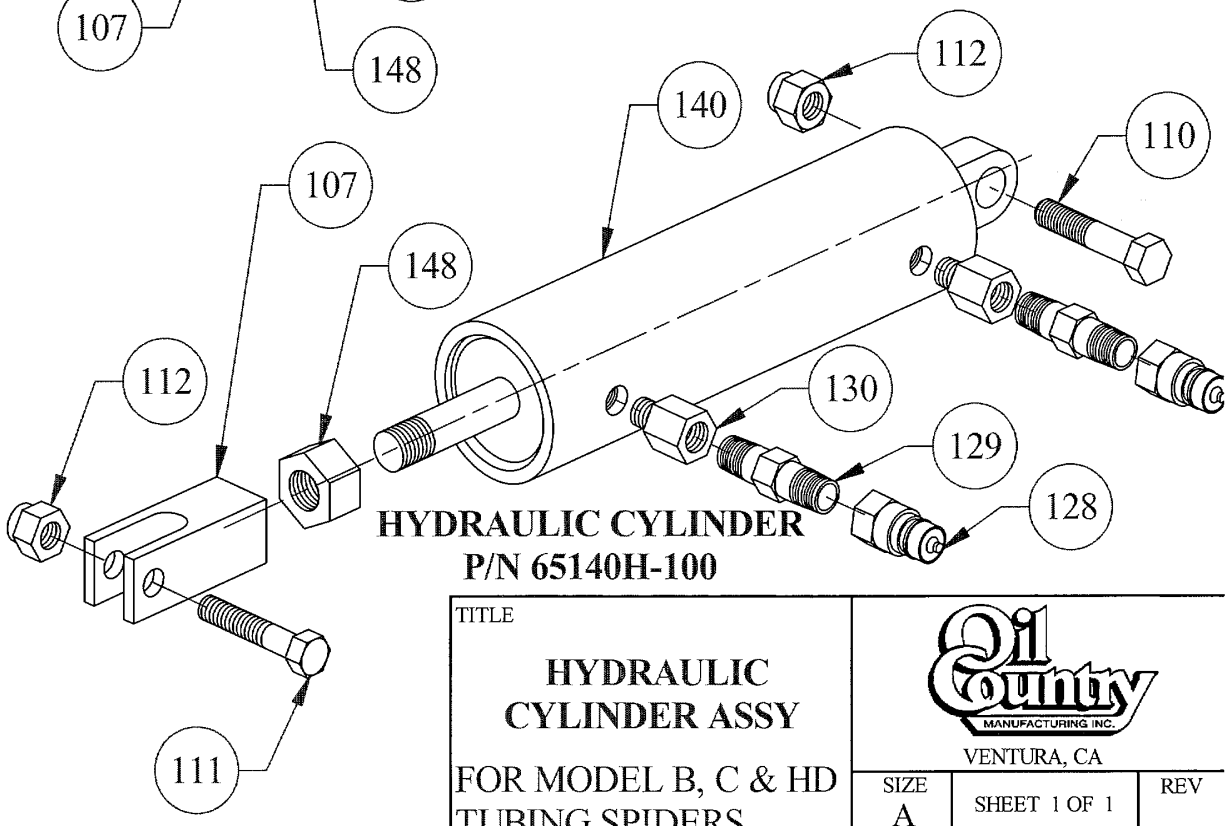
REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
141	65141	1	Barrel
142	65142	1	Piston Rod
143	65143	1	End Seal
144	992154-330	1	O-Ring
145	992154-228	2	O-Ring
146	992154-210	1	O-Ring
147	992253-250	2	Internal Retainer Ring
150	65150	1	Cylinder End Cap
151	65151	1	Piston Head
152	992116-13	1	Piston Lock Nut
153	992154-014	1	O-Ring
154	992050-03	2	Plastic Plug
107	65107	1	Yoke
148	992107-15	1	Jam Nut

PNEUMATIC CYLINDER
65140-100
(WITH NIPPLES, YOKE, AND JAM NUT)
SEE ILLUSTRATION ILL-358

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
140	65140	1	Pneumatic Cylinder, Sub Assembly
107	65107	1	Yoke
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
128	992285-MH-6-6	2	Male Disconnect (Not Included In Assembly)
129	46053	2	Nipple
148	992107-15	1	Jam Nut



HYDRAULIC CYLINDER
P/N 65140H



HYDRAULIC CYLINDER
P/N 65140H-100

TITLE **HYDRAULIC CYLINDER ASSY** FOR MODEL B, C & HD TUBING SPIDERS	Oil Country MANUFACTURING INC. VENTURA, CA SIZE A | SHEET 1 OF 1 | REV DRAWING NO. **ILL-359**

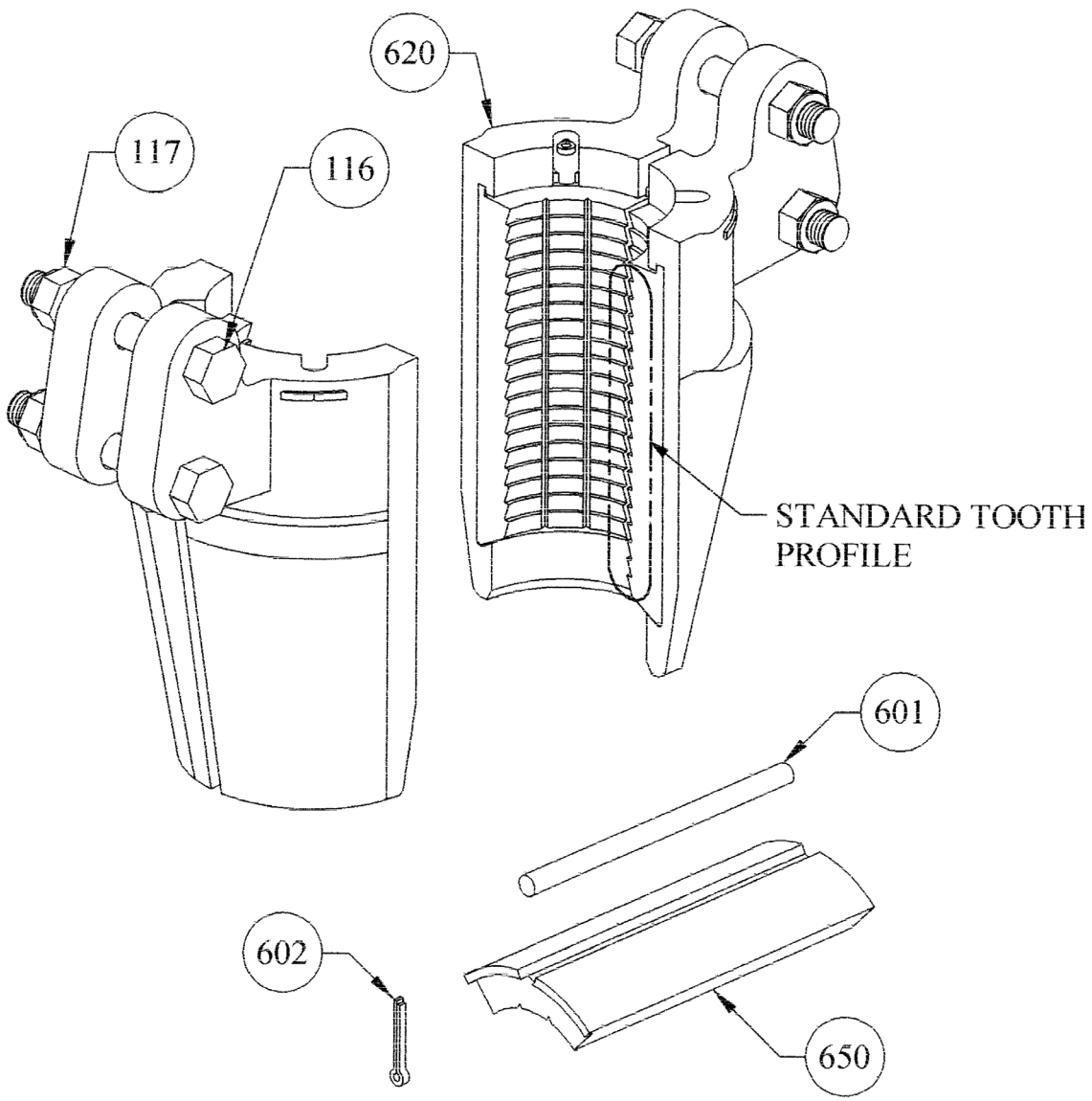
HYDRAULIC CYLINDER ASSEMBLY
FOR MODEL “B”, “C” AND “HD” TUBING SPIDERS
65140H
HYDRAULIC CYLINDER
(LESS NIPPLES, MALE DISCONNECTS, YOKE AND JAM NUT)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
107	65107	1	Yoke
141	65141H	1	Barrel
142	65142	1	Piston Rod
143	65143H	1	End Seal
144	992154-220	3	O-Ring
146	992154-210	1	O-Ring
147	992253-162	2	Internal Retainer Ring
148	992107-15	1	3/4 Jam Nut
150	65150H	1	Cylinder End Cap
151	65151H	1	Piston Head
152	992116-13	1	Piston Lock Nut
153	992154-014	1	O-Ring
154	992287-SC-210	2	Backup O-Ring
155	992287-SC-220	6	Backup O-Ring
156	992050-02	2	1/4 Plastic Plug

HYDRAULIC CYLINDER
65140H-100
(WITH NIPPLES, YOKE AND JAM NUT)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
140	65140H	1	Hydraulic Cylinder, Sub Assembly
110	992005-09	1	Hex Head Cap Screw
111	992005-07	1	Hex Head Cap Screw
112	992089-09	2	Hex Nut
128	992285-MH-6-6	2	Male Disconnect (Not Included In Assy)
129	46053	2	Nipple
130	992308-4-6	2	1/4" Male x 3/8” Female NPT Adapter

SLIP BODIES, WITH STANDARD INSERTS AND COMPONENTS ILLUSTRATION



TITLE	
SLIP BODIES, WITH STANDARD INSERTS AND COMPONENTS	Oil County MANUFACTURING INC. VENTURA, CA
	SIZE A | SHEET 1 OF 1 | REV A
	DRAWING NO. **ILL-360**

B 3 1/2 SLIP BODY
WITHOUT OCM SLIP INSERTS
FOR MODEL "B" TUBING SPIDER (110,000 LB. RATING)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
620	60622-100	1 Set	Slip Body; 3 1/2" Nom., For OCM Slip Inserts
116	65116	4	Hex Head Cap Screw (Included With Slip Body Set)
117	992089-13	4	Hex Nut (Included With Slip Body Set)
601	65601	4	Retainer Pin (Included With Slip Body Set)
602	992012-44	4	Cotter Pin

B 3 1/2 SLIP BODY WITH INSERTS INSTALLED	
PART NUMBER	**DESCRIPTION**
60622-100-1.315	B 3 1/2 Body Set With 1.315 (1") Inserts Installed
60622-100-1.660	B 3 1/2 Body Set With 1.660 (1 1/4") Inserts Installed
60622-100-1.900	B 3 1/2 Body Set With 1.900 (1 1/2") Inserts Installed
60622-100-2.060	B 3 1/2 Body Set With 2.060 (2 1/16") Inserts Installed
60622-100-2.375	B 3 1/2 Body Set With 2.375 (2 3/8") Inserts Installed
60622-100-2.875	B 3 1/2 Body Set With 2.875 (2 7/8") Inserts Installed
60622-100-3.500	B 3 1/2 Body Set With 3.500 (3 1/2") Inserts Installed

INSERTS FOR B OR C 3 1/2" BODIES
STANDARD SLIP INSERT SET (3 1/2" NOM.)
STANDARD SLIP TEETH FOR OCM MODEL "B" OR "C" TUBING SPIDER

1.315" STD. SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-1.315**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 1.315" TBG.

1.660" STD. SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-1.660**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 1.660" TBG.

1.900" STD.SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-1.900**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 1.900" TBG.

2.060" STD. SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-2.060**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 2.060" TBG.

2 3/8" STD. SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-1**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 2 3/8" TBG.

2 7/8" STD. SLIP INSERT SET"B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-2**	1 Set	"Full Circle" Insert Set;3 1/2" Nom. X 2 7/8" TBG.

3.125" STD. SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-3.125**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 3.125" TBG.

3 1/2" STD SLIP INSERT SET "B" OR "C" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65652-3**	1 Set	"Full Circle" Insert Set; 3 1/2" Nom. X 3 1/2" TBG.

C INSERTS FOR 4 1/2" BODY
STANDARD SLIP INSERT SET (4 1/2" NOM.)
STANDARD SLIP TEETH FOR OCM MODEL "C" & "HD" TUBING SPIDERS

3 1/2" STD. SLIP INSERT SET "C" & "HD" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65653-1**	1 Set	"Full Circle" Insert Set; 4 1/2" Nom. X 3 1/2" TBG.

4" STD. SLIP INSERT SET "C" & "HD" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65653-2**	1 Set	"Full Circle" Insert Set; 4 1/2" Nom. X 4" TBG.

4 1/2" STD. SLIP INSERT SET "C" & "HD" SPIDER

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
650	**65653-3**	1 Set	"Full Circle" Insert Set; 4 1/2" Nom. X 4 1/2" TBG.

602	992012-44	4	Cotter Pins Are Included In Each Set Of Slip Inserts Above

C 3 1/2" SLIP BODY
WITHOUT OCM SLIP INSERTS
MODEL "C" & "HD" TUBING SPIDERS
(165,000 LB. & 250,000 LB. RATINGS)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
620	**65622-100**	1 Set	Slip Body; 3 1/2" Nom., For OCM Slip Inserts
116	65116	4	Hex Head Cap Screw (Included With Slip Body Set)
117	992089-13	4	Hex Nut (Included With Slip Body Set)
601	65601	4	Retainer Pin (Included With Slip Body Set)
602	992012-44	4	Cotter Pin

C 3 1/2 SLIP BODY WITH INSERTS INSTALLED	
PART NUMBER	**DESCRIPTION**
65622-100-1.315	C 3 1/2 Body Set With 1.315 (1") Inserts Installed
65622-100-1.660	C 3 1/2 Body Set With 1.660 (1 1/4") Inserts Installed
65622-100-1.900	C 3 1/2 Body Set With 1.900 (1 1/2") Inserts Installed
65622-100-2.060	C 3 1/2 Body Set With 2.060 (2 1/16") Inserts Installed
65622-100-2.375	C 3 1/2 Body Set With 2.375 (2 3/8") Inserts Installed
65622-100-2.875	C 3 1/2 Body Set With 2.875 (2 7/8") Inserts Installed
65622-100-3.500	C 3 1/2 Body Set With 3.500 (3 1/2") Inserts Installed

C 4 1/2" SLIP BODY
WITHOUT OCM SLIP INSERTS
MODEL "C" & "HD" TUBING SPIDERS
(165,000 LB. & 250,000 LB. RATINGS)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
620	**65623-100**	1 Set	Slip Body; 4 1/2" Nom., For OCM Slip Inserts
116	65116	4	Hex Head Cap Screw (Included With Slip Body Set)
117	992089-13	4	Hex Nut (Included With Slip Body Set)
601	65601	4	Retainer Pin (Included With Slip Body Set)
602	992012-44	4	Cotter Pin

C 4 1/2 SLIP BODY WITH INSERTS INSTALLED	
PART NUMBER	**DESCRIPTION**
65623-100-3.500	C 4 1/2 Body Set With 3.500 (3 1/2") Inserts Installed
65623-100-4.000	C 4 1/2 Body Set With 4.000 (4") Inserts Installed
65623-100-4.500	C 4 1/2 Body Set With 4.500 (4 1/2") Inserts Installed

C & HD SOLID BODIES
SOLID SLIP BODY ASSEMBLY - 4.75" TUBING
MODEL "C" & "HD" TUBING SPIDERS
(165,000 LB. & 250,000 LB. RATINGS)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
620	**65624-4.75**	1 Set	Solid Slip Body; For 4.75" Tubing
116	65116	4	Hex Head Cap Screw (Included With Slip Body Set)
117	992089-13	4	Hex Nut (Included With Slip Body Set)

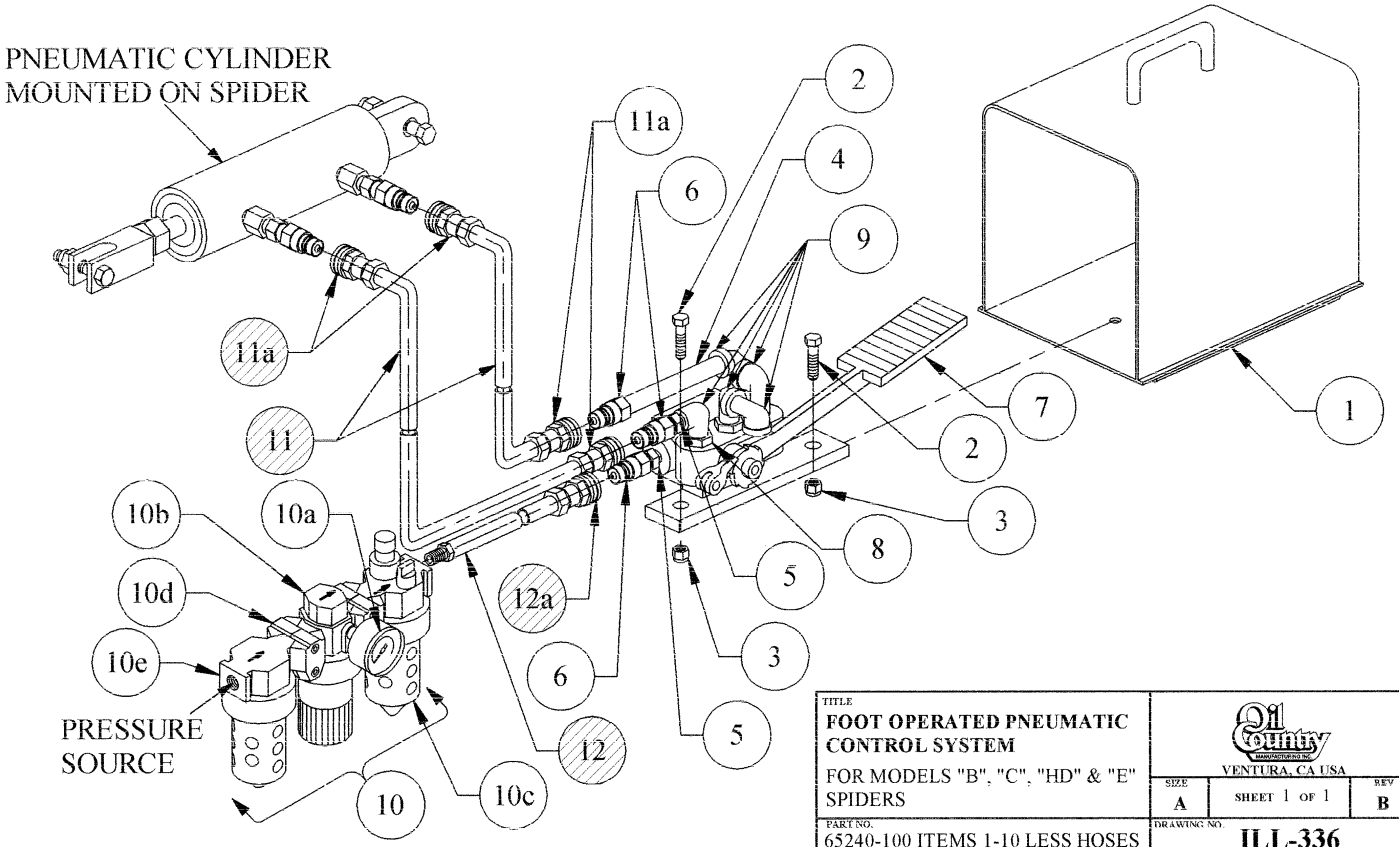
SOLID SLIP BODY ASSEMBLY - 5" TUBING
MODEL "C" & "HD" TUBING SPIDERS
(165,000 LB. & 250,000 LB. RATINGS)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
620	**65624-1**	1 Set	Solid Slip Body; For 5" Tubing
116	65116	4	Hex Head Cap Screw (Included With Slip Body Set)
117	992089-13	4	Hex Nut (Included With Slip Body Set)

SOLID SLIP BODY ASSEMBLY - 5 1/2" TUBING
MODEL "C" & "HD" TUBING SPIDERS
(165,000 LB. & 250,000 LB. RATINGS)

REF. NO.	PART NUMBER	QTY.	PART DESCRIPTION
620	**65624-2**	1 Set	Solid Slip Body; For 5 1/2" Tubing
116	65116	4	Hex Head Cap Screw (Included With Slip Body Set)
117	992089-13	4	Hex Nut (Included With Slip Body Set)

FOOT OPERATED PNEUMATIC CONTROL SYSTEM



TITLE **FOOT OPERATED PNEUMATIC CONTROL SYSTEM** FOR MODELS "B", "C", "HD" & "E" SPIDERS	Oil Country Manufacturing Inc. VENTURA, CA USA SIZE A · SHEET 1 OF 1 · REV B
PART NO. 65240-100 ITEMS 1-10 LESS HOSES	DRAWING NO. **ILL-336**

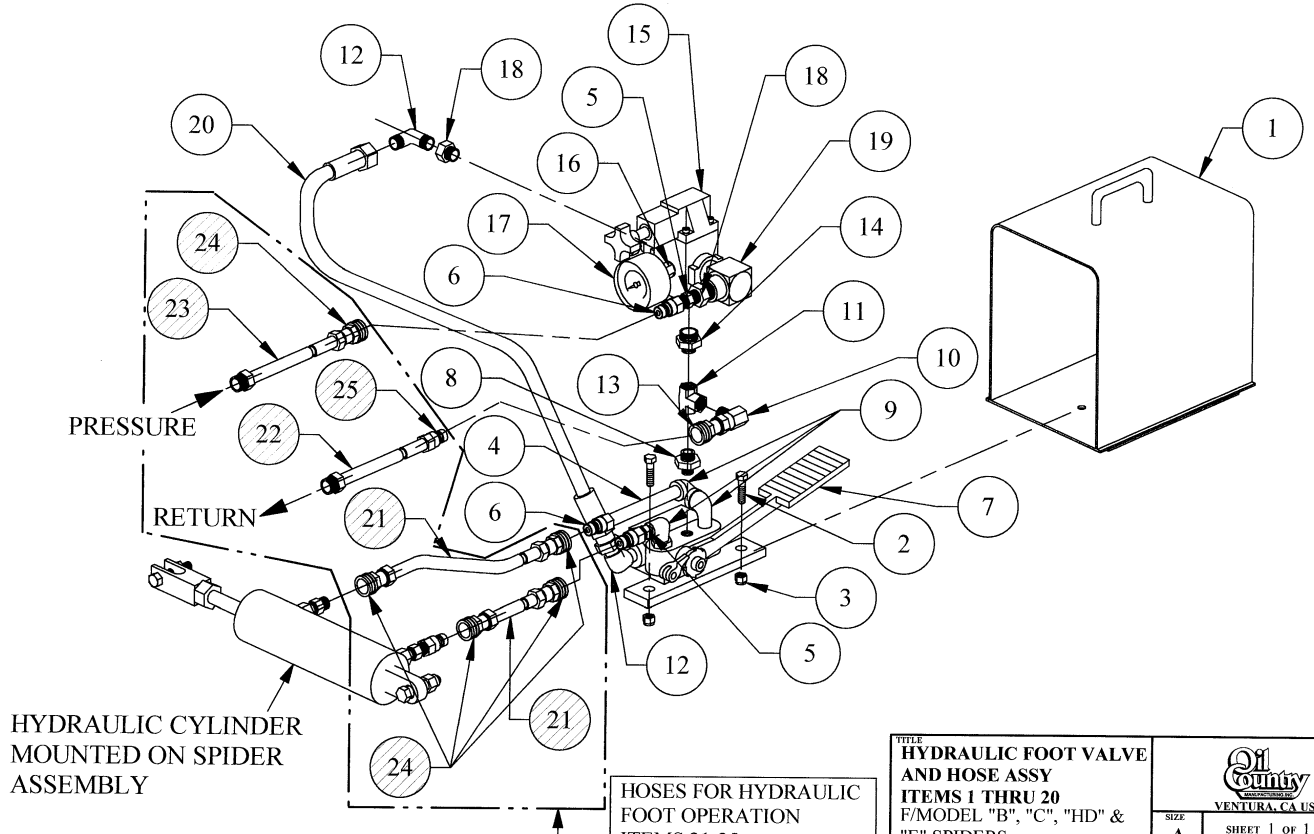
FOOT OPERATED PNUEMATIC CONTROL SYSTEM
FOR MODEL "B", "C", "HD" & "E" TUBING SPIDERS
SEE ILLUSTRATION ILL-336

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65240-100		**Pneumatic Foot Control Valve Assembly With Pressure Regulator (Less Hoses) Ref 1 Thru 10**
	65200-100		Pneumatic Foot Control Valve Subassembly Less Pressure Regulator And Hoses Ref 1 Thru 9
1	65202	1	Cover, Foot Valve
2	992003-07	2	Screw, Hex Hd Cap
3	992089-05	2	Nut, Nyloc Lt Hex
4	992112-22	1	Nipple, Long
5	992131-S-06-06	2	Adapter, 3/8 X 3/8
6	992285-MH-6-6	3	Disconnect, Male
7	992278	1	Valve, Pneumatic Foot
8	992137-S-08-06	4	Adapter, 1/2 X 3/8
9	992481-06	5	Elbow, 90°
10	**992311**	**1**	**Regulator, Pneumatic Assembly (Includes 10a, 10b, 10c, 10d, 10e)**
10a	992311-05	1	Gauge 2", Pneumatic
10b	933100-03	1	Regulator, Pneumatic
10c	933100-04	1	Lubricator, Pneumatic
10d	933100-05	2	Modular, Clamp Kit, Pneumatic
10e	933100-02	1	Filter, Pneumatic

HOSES FOR PNEUMATIC FOOT OPERATION

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65300	**1 Set**	**Hoses, Pneumatic; For Foot Valve; Set Of 3 (Qty 2 Of Ref 11 And Qty 1 Of Ref 12) With Female Quick Disconnects**
11	**701Q-06-180-02F**	**2**	**Hose, Pneumatic; 180" Long With Female Quick Disconnects On Both Ends (Ref 11a)**
11a	992285-FH-6-6	4	Disconnect, Female
12	**701Q-06-180-01F**	**1**	**Hose, Pneumatic; 180" Long With Female Quick Disconnect On One End**
12a	992285-FH-6-6	1	Disconnect, Female

FOOT OPERATED HYDRAULIC CONTROL SYSTEM



HOSES FOR HYDRAULIC FOOT OPERATION ITEMS 21-25
PART NO. 65300H

TITLE: **HYDRAULIC FOOT VALVE AND HOSE ASSY ITEMS 1 THRU 20** F/MODEL "B", "C", "HD" & "E" SPIDERS	Oil Country, VENTURA, CA USA
PART NO. 65241-100	SIZE A · SHEET 1 OF 1 · REV · DRAWING NO. **ILL-336-1**

FOOT OPERATED HYDRAULIC CONTROL SYSTEM

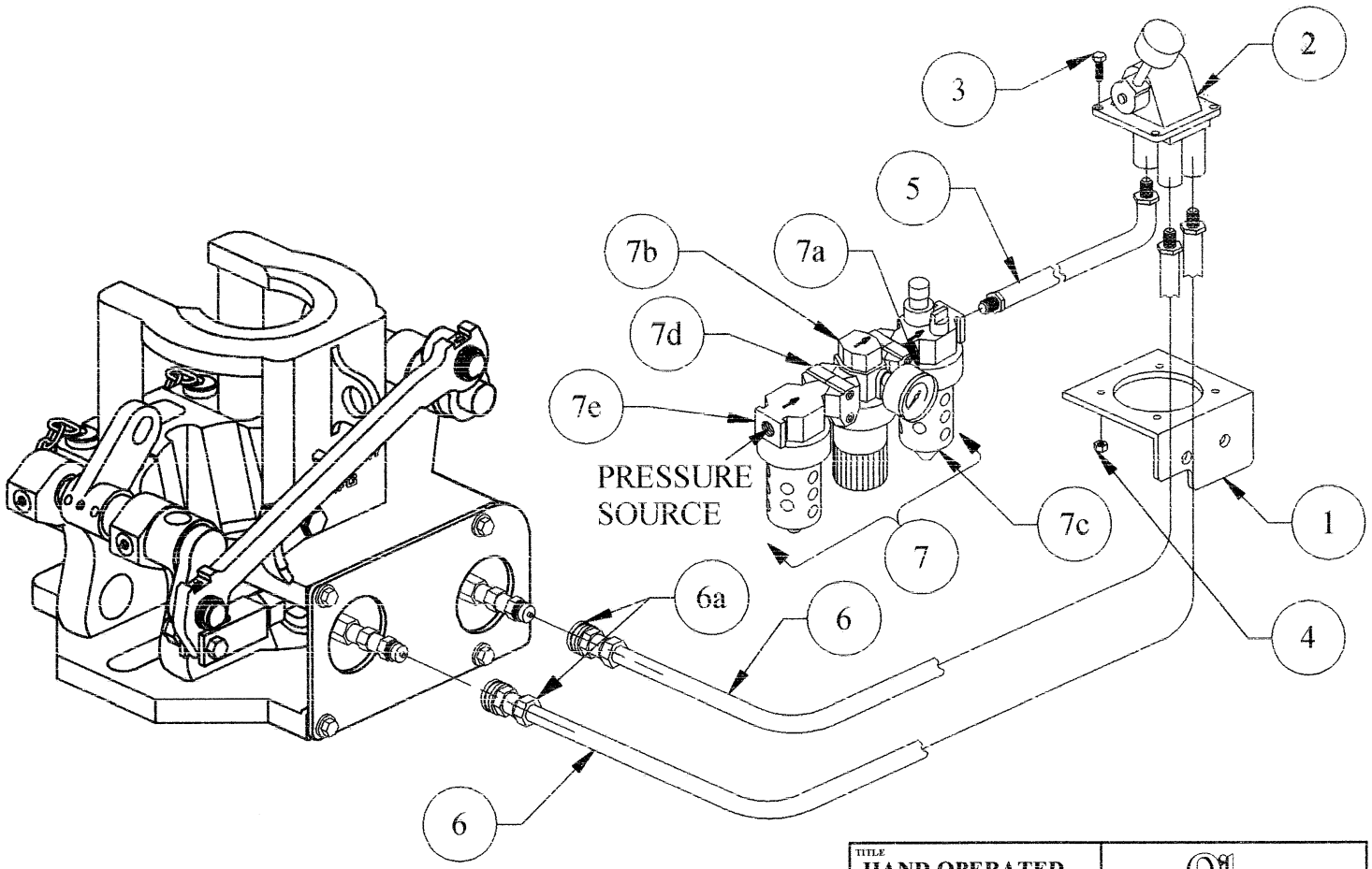
FOR MODEL "B", "C", "HD" & "E" TUBING SPIDERS

SEE ILLUSTRATION ILL-336-1

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65241-100		**Hydraulic Foot Control Valve Assembly With Pressure Relief Valve (Less Hoses) Items 1 Thru 20**
1	65202-01	1	Cover, Foot Valve
2	992003-07	2	Screw, Hex Hd Cap
3	992089-05	2	Nut, Nyloc Lt Hex
4	992112-22	1	Nipple, Long
5	992131-S-06-06	2	Adapter, 3/8 X 3/8 Nipple
6	992285-MH-6-6	3	Disconnect, Male
7	992278	1	Valve, Hydraulic Foot
8	992131-S-08-06	1	Adapter, 1/2 X 3/8 Nipple
9	992124-06	3	Elbow, 90°
10	992338-S-08-06	1	Adapter, 90° 1/2 X 3/8
11	992144-S-08-08	1	Adapter 1/2 FM Run Tee
12	992141-S-6-6	2	Adapter 90° 3/8 NPT X JIC
13	992285-FH-6-6	1	Adapter Female Disconnect
14	992131-S-12-08	1	Adapter 3/4 X 1/2 Nipple
	65149-100		**Valve, Hydraulic Relief Assembly (Items 15 Thru 17)**
15	992312	1	Valve, Hydraulic Relief
16	992850-S-04-04	1	Adapter, 1/4"
17	992312-05	1	Gauge
18	992137-S-12-06	2	Adapter 3/4 X 3/8 Bushing
19	992142-S-12-12	1	Adapter 90° 3/4NPT X 3/4FNPT
20	700B-06-014-02	1	Hydraulic, Hose

HOSES FOR HYDRAULIC FOOT OPERATION

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65300H	**1 Set**	**Hoses, Hydraulic; For Foot Valve; Set Of 4 (Qty 2 Of Item 21 And Qty 1 Of Item 22 And Qty 1 Of Item 23)**
21	**700Q-06-180-02F**	**2**	**Hose, Hydraulic; 180" Long With Female Quick Disconnects On Both Ends (Item 24)**
22	**700Q-06-180-01M**	**1**	**Hose, Hydraulic; 180" Long With Male Quick Disconnect On One End (Item 25)**
23	700Q-06-180-01F	1	Hose, Hydraulic; 180" Long With Female Quick Disconnect On One End (Item 24)
24	992285-FH-6-6	5	Disconnect, Female
25	992285-MH-6-6	1	Disconnect, Male



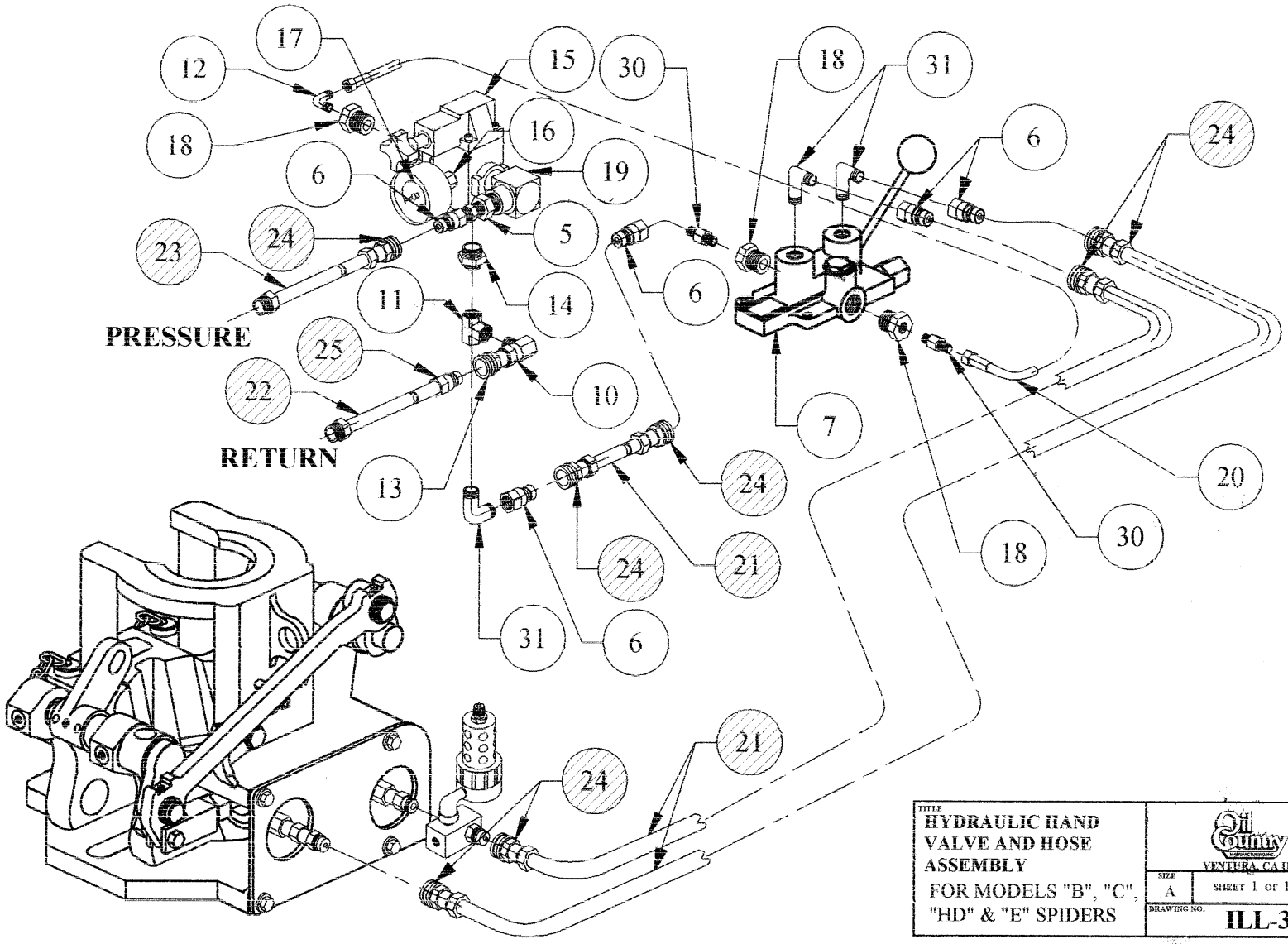
TITLE **HAND OPERATED PNEUMATIC CONTROL SYSTEM** F/MODELS B, C, HD & E SPIDER	Oil Country MANUFACTURING INC. VENTURA, CA USA	
	SIZE A	SHEET 1 OF 1
	REV A	
	DRAWING NO. **ILL-336-2**	

HAND OPERATED PNUEMATIC CONTROL SYSTEM

FOR MODEL "B", "C", "HD" & "E" TUBING SPIDERS

SEE ILLUSTRATION ILL-336-2

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65240-200		**Pneumatic Hand Control Valve Assembly With Pressure Regulator And Hoses Ref 1 Thru 7**
	65220-100		Pneumatic Hand Control Valve Subassembly Less Pressure Regulator Ref 1 Thru 6
1	55150-02	1	Mounting Bracket
2	992277	1	Hand Operated Pneumatic Valve
3	992001-04	4	Screw
4	992089-01	4	Nut
5	65300-200	1	180" Long Pneumatic Hose
6	65300-101	2	180" Long Pneumatic Hose Assy (W/Female Quick Disconnects (Item 6a)
6a	992285-FH-6-6	2	Female Quick Disconnect
7	**992311**	**1**	**Regulator, Pneumatic Assembly (Includes 7a, 7b, 7c, 7d, 7e)**
7a	992311-05	1	Gauge 2", Pressure
7b	993100-03	1	Regulator, Pneumatic
7c	993100-04	1	Lubricator, Pneumatic
7d	993100-05	2	Modular, Clamp Kit, Pneumatic
7e	993100-02	1	Filter, Pneumatic



TITLE **HYDRAULIC HAND VALVE AND HOSE ASSEMBLY** FOR MODELS "B", "C", "HD" & "E" SPIDERS	Oil Country VENTURA, CA USA SIZE A | SHEET 1 OF 1 | REV A DRAWING NO. **ILL-336-3**

HAND OPERATED HYDRAULIC CONTROL SYSTEM

FOR MODEL "B", "C", "HD" & "E" TUBING SPIDERS

SEE ILLUSTRATION ILL-336-3

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65241-200		**Hydraulic Hand Control Valve Assembly With Pressure Relief Valve (Less Hoses) Items 5 Thru 7, 10 Thru 20, 30, 31**
5	992131-S-06-06	2	Adapter, 3/8 X 3/8 Nipple
6	992285-MH-6-6	5	Disconnect, Male
7	992309	1	Valve, Hydraulic Hand
10	992338-S-08-06	10	Adapter, 90° 1/2 X 3/8
11	992144-S-08-08	1	Adapter 1/2 FM Run Tee
12	992141-S-6-6	1	Adapter 90° 3/8 NPT X JIC
13	992285-FH-6-6	1	Adapter Female Disconnect
14	992131-S-12-08	1	Adapter 3/4 X 1/2 Nipple
	65149-100		**Valve, Hydraulic Relief Assembly (Items 15 Thru 17)**
15	992312	1	Valve, Hydraulic Relief
16	992850-S-04-04	1	Adapter, 1/4"
17	992312-05	1	Gauge
18	992137-S-12-06	3	Adapter 3/4 X 3/8 Bushing
19	992142-S-12-12	1	Adapter 90° 3/4NPT X 3/4FNPT
20	700B-06-014-02	1	Hydraulic, Hose
30	992381-S-06-06	1	Adapter

HOSES FOR HYDRAULIC HAND OPERATION

ITEM	PART NO.	QTY.	PART DESCRIPTION
	65301H	**1 Set**	**Hoses, Hydraulic; For Hand Valve; Set Of 5 (Qty 3 Of Item 21 And Qty 1 Of Item 22 And Qty 1 Of Item 23)**
21	**700Q-06-180-02F**	**3**	**Hose, Hydraulic; 180" Long With Female Quick Disconnects On Both Ends (Item 24)**
22	**700Q-06-180-01M**	**1**	**Hose, Hydraulic; 180" Long With Male Quick Disconnect On One End (Item 25)**
23	700Q-06-180-01F	1	Hose, Hydraulic; 180" Long With Female Quick Disconnect On One End (Item 24)
24	992285-FH-6-6	7	Disconnect, Female
25	992285-MH-6-6	1	Disconnect, Male

PNEUMATIC TUBING SPIDER

MODELS "C" & "HD"

SPARE PARTS LIST FOR ONE YEAR'S OPERATION

PART NO.	NO. REQ'D	DESCRIPTION
65107	1	Yoke
65122	4	Clip, Retainer
65124	4	Bushing, Crank
65125	2	Bushing, Link
65136	2	Bolt, Safety
65140K	2	Kit, Repair Pneumatic Cylinder
65140	1	Cylinder, Pneumatic Assembly
65601	12	Pin, Retainer (For Slips)
65116	4	Bolt (For Slips)
992005-07	4	Bolt
992005-09	4	Bolt
992012-44	12	Pin, Cotter (For Slips)
992073-01	12	Fitting, Grease
992075-144	4	Set Screw
992089-09	8	Nut
992089-13	4	Nut (For Slips)
992161-06	4	Pin, Taper

HYDRAULIC TUBING SPIDER

MODELS "C" & "HD"

SPARE PARTS LIST FOR ONE YEAR'S OPERATION

PART NO.	NO. REQ'D	DESCRIPTION
65107	1	Yoke
65122	4	Clip, Retainer
65124	4	Bushing, Crank
65125	2	Bushing, Link
65136	2	Bolt, Safety
65140HK	2	Kit, Repair Hydraulic Cylinder
65140H	1	Cylinder, Hydraulic Assembly
65601	12	Pin, Retainer (For Slips)
65116	4	Bolt (For Slips)
992005-07	4	Bolt
992005-09	4	Bolt
992012-44	12	Pin, Cotter (For Slips)
992073-01	12	Fitting, Grease
992075-144	4	Set Screw
992089-09	8	Nut
992089-13	4	Nut (For Slips)
992161-06	4	Pin, Taper

PNEUMATIC TUBING SPIDER

MODEL "B"

SPARE PARTS LIST FOR ONE YEAR'S OPERATION

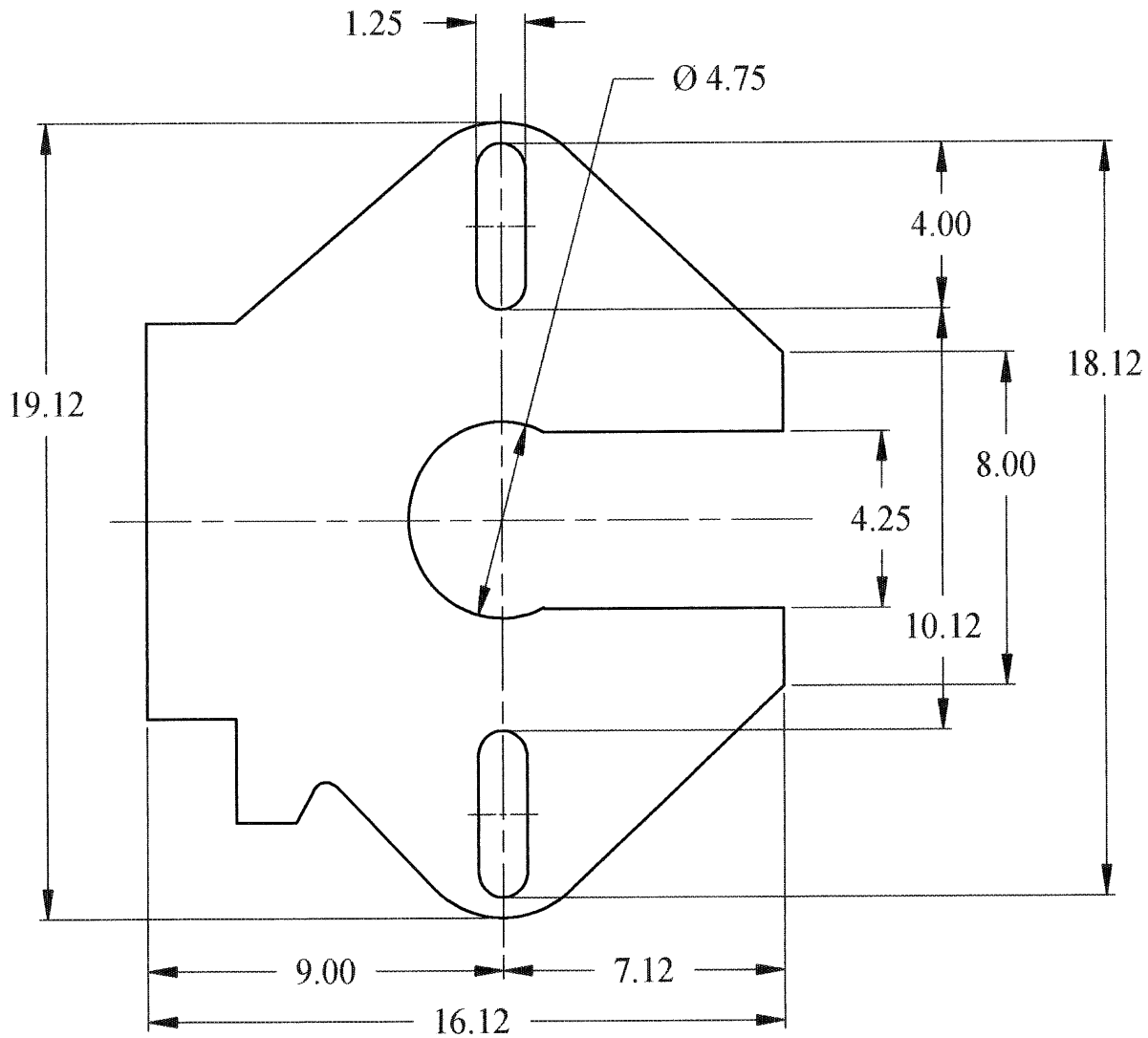
PART NO.	NO. REQ'D	DESCRIPTION
65107	1	Yoke
65122	4	Clip, Retainer
60124	4	Bushing, Crank
60125	2	Bushing, Link
65136	2	Bolt, Safety
65140K	2	Kit, Repair Pneumatic Cylinder
65140	1	Cylinder, Pneumatic Assembly
65601	12	Pin, Retainer (For Slips)
65116	4	Bolt (For Slips)
992005-07	4	Bolt
992005-09	4	Bolt
992012-44	12	Pin, Cotter (For Slips)
992073-01	12	Fitting, Grease
992075-144	4	Set Screw
992089-09	8	Nut
992089-13	4	Nut (For Slips)
992161-06	4	Pin, Taper

HYDRAULIC TUBING SPIDER

MODEL "B"

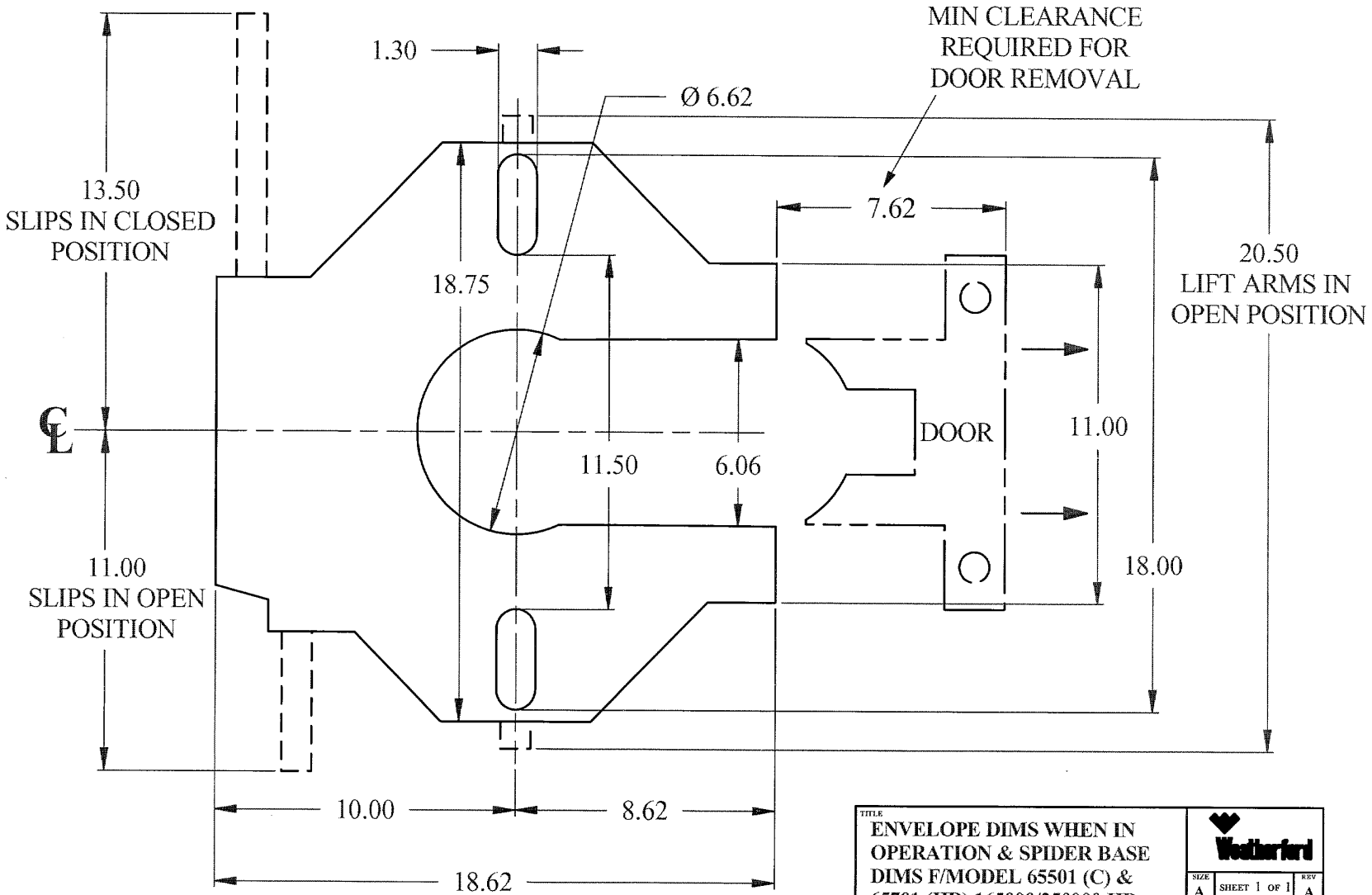
SPARE PARTS LIST FOR ONE YEAR'S OPERATION

PART NO.	NO. REQ'D	DESCRIPTION
65107	1	Yoke
65122	4	Clip, Retainer
60124	4	Bushing, Crank
60125	2	Bushing, Link
65136	2	Bolt, Safety
65140HK	2	Kit, Repair Hydraulic Cylinder
65140H	1	Cylinder, Hydraulic Assembly
65601	12	Pin, Retainer (For Slips)
65116	4	Bolt (For Slips)
992005-07	4	Bolt
992005-09	4	Bolt
992012-44	12	Pin, Cotter (For Slips)
992073-01	12	Fitting, Grease
992075-144	4	Set Screw
992089-09	8	Nut
992089-13	4	Nut (For Slips)
992161-06	4	Pin, Taper



SPIDER BASE DIMENSIONS MODEL 60000 (B)

OIL COUNTRY MANUFACTURING INC. VENTURA, CA USA	
DRAWING NO. ILL-025	SHT 1 OF 1



TITLE: ENVELOPE DIMS WHEN IN OPERATION & SPIDER BASE DIMS F/MODEL 65501 (C) & 65701 (HD) 165000/250000 HD	Weatherford
SIZE A	SHEET 1 OF 1
REV A	
DRAWING NO. ILL-446	